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FLORIDA AUTOMOTIVE RECYCLERS' HANDBOOK



Reducing and Managing Wastes

Published by
Florida Department of Environmental Protection
Hazardous Waste Compliance Assistance Program
and
Florida Center for Solid and Hazardous Waste Management

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We would like to express our gratitude for your help in the preparation of this handbook and for allowing the replication of your materials within this handbook.

Florida Department of Environmental Protection-South District

Thank you for your help in the production of this handbook. Your “Best Management Practices for Auto Salvage Yards” checklist was a valuable resource used to develop and organize this handbook.

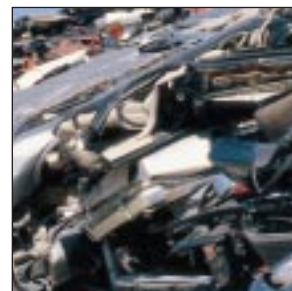
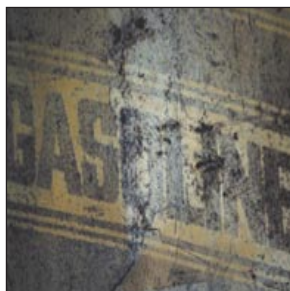
Lu Burson, Central District

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Lenny Damron, Damron’s Auto Parts and

Jerry Runnels, Damron’s Auto Parts

We would like to express our gratitude to you and your employees for allowing us to visit your site, and for answering our numerous questions. Thank you for accommodating us.



This auto salvage handbook is a product of the Florida Department of Environmental Protection and the Florida Center for Solid and Hazardous Waste Management. Any of the material may be used with acknowledgment, but it may not be sold for a profit-making venture.

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This document was published to assist businesses on hazardous waste management issues and regulatory compliance. The suggested best management practices (BMPs) may help businesses operate in an environmentally appropriate manner. Some of the BMPs may go beyond what is required to remain in compliance with regulations. This information is offered only as guidance. Specific requirements may vary with individual processes and/or businesses. Business owners are responsible for obtaining complete information about all applicable regulations. The Florida Department of Environmental Protection and the Florida Center for Solid and Hazardous Waste Management are not authorized to relieve any person from any requirement of federal regulations or Florida law.



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Other RCRA publications produced by the Florida Center for Solid and Hazardous Waste Management for the DEP include:

Guides on Hazardous Waste Management for Florida's

- Agricultural Pesticide Users
- Automotive Repair Shops
- Dry Cleaners
- Fiber-Reinforced Plastic Manufacturers
- Furniture Finishers
- Laboratories
- Paint and Body Shops
- Photo Shops
- Printed Wiring Board Manufacturers
- Printers

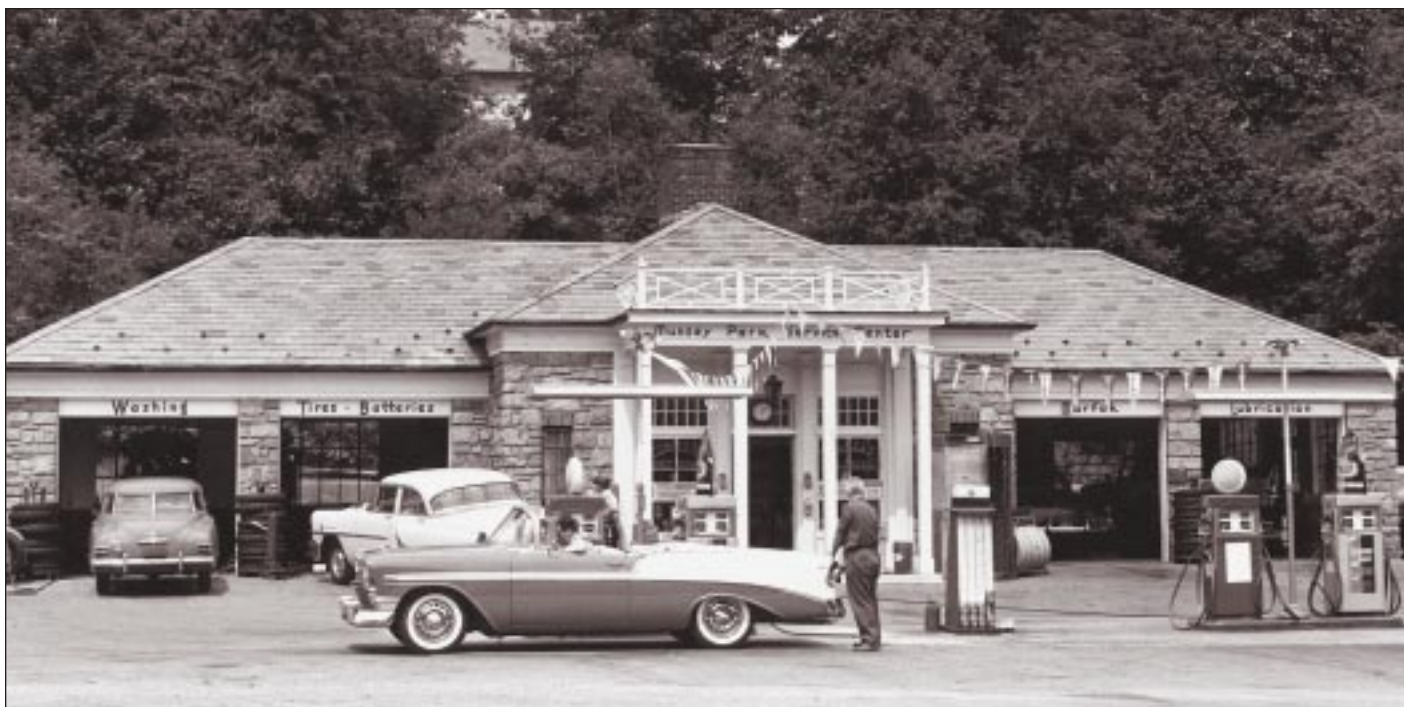
Managing Mercury: Best Management Practices for Florida's Medical Facilities

These publications are available from your County Environmental Protection Department, the DEP, or the Florida Center for Solid and Hazardous Waste Management (Center). These publications can also be downloaded from the Center's web site.

Visit the Center's web site at

<http://www.floridacenter.org>

INTRODUCTION



Why Should I Care About Hazardous Wastes and Other Potentially Polluting Wastes?

As a business owner, operator, or employee, you may be producing materials that can harm people and the environment. Not all harmful or polluting wastes are hazardous. As a waste generator it is your responsibility to determine which wastes are hazardous and to manage all wastes properly. State and County environmental compliance inspectors may visit your auto salvage facility to ensure that hazardous and solid wastes are being properly managed. Failure to collect and appropriately manage a waste stream could subject you to large fines. Fines may range from \$10,000 to \$25,000 per violation per day.

Vehicle recyclers make it easy for consumers to find clean, used parts for all types of vehicles. They play a valuable role by rebuilding, recovering, and reselling usable parts, and recycling materials that cannot be re-used in their present form. Even though the generation of wastes may be unavoidable, vehicle recyclers can improve the quality of our environment through good waste management practices. The best way to

reduce your liability and to increase your bottom line is to **RECYCLE**. Be sure to document all recycling and disposal efforts.

Waste reduction and pollution prevention practices can help your business by:

- Creating a healthier, safer work environment for employees.
- Preventing serious injuries or illnesses.
- Reducing long-term liability risks.
- Reducing the costs of hazardous waste management and disposal.
- Making it easier to sell your property or business in the future.
- Making it easier to comply with regulations.
- Reducing operating costs by using fewer raw or new materials.
- Creating a great marketing and public relations tool. Tell everyone that your business is environmentally responsible!

Did You Know ?

- About 10 million vehicles are recycled annually.
- Vehicle recycling generates about 12 million tons of recycled steel every year in the United States. That is 37% of all ferrous scrap.
- Recycling saves an estimated 85 million barrels of oil that would otherwise be used to manufacture new replacement parts.
- Recycling one car conserves 2,500 pounds of iron ore, 1,000 pounds of coal and 40 pounds of limestone.

Waste Reduction – A Good Start

Waste is defined as any material you intend to discard.

Waste is considered yours if your actions or business operations cause clean material to become contaminated and unusable for its intended, original purpose. If waste is on your property (even if someone else dumped it there or left it behind) you are responsible for it.

As a business owner, it is your **responsibility** to ensure that your waste haulers, disposal companies and recyclers are properly permitted, licensed, registered, insured and running reputable operations. If your waste becomes a problem for human health or the environment subsequent to your releasing it to another entity, you are ***still legally responsible!***

The greatest economic and environmental benefits come from avoiding the generation of waste in the first place. Recycling is better than disposal, but waste reduction is even better! Recycle wastes and wastewater which you cannot reduce. These ideas should help to reduce waste, free up labor, and may provide payback on investments.

Waste reduction and pollution prevention best management practices are provided in detail throughout each section of this manual. For more information on waste reduction and pollution prevention ideas contact your DEP District office (See back cover) or your County Environmental Protection Department.

To begin

- ☞ Take a walk through your business.
- ☞ Look at all the processes that use chemicals or generate solid, liquid or air wastes.
- ☞ Ask yourself if there is a way you can change a process so that it does not produce a waste or if you can lower the toxicity of the products you use.
- ☞ Do not let yourself get overwhelmed! Make small incremental changes.
- ☞ Always ask for a Material Safety Data Sheet (MSDS) before ordering any new product (See Page 26).



SUGGESTED BEST MANAGEMENT PRACTICES (BMPs)



A – Vehicle situated off ground on gravel-covered concrete surface; **B** – Vehicle undergoing fluid removal on an indoor impervious surface.

C – Draining fuel from a gas tank into above ground storage tank through screen filter with lid; **D** – Stored engine blocks with plugs to prevent leakage.

What Should I Do After the Vehicle Gets into the Yard?

All businesses are different. Some are larger than others; some perform tasks that others do not. The following list offers some helpful best management practices for any size vehicle recycler.

Incoming Cars

- 🔧 **Inspect** incoming vehicles for leaks in engines, radiators, transmissions, differentials, fuel tanks and damaged areas. Place drip pans under leaks to collect all fluids. Immediately stop the leaks.
- 🔧 **Remove** fuel, refrigerants, and the battery as soon as possible.

- 🔧 **Drain** all fluids from vehicles into appropriate containers over a concrete drip pad before crushing or storing on bare ground. This includes fluids in: engines, radiators, transmissions, heater cores, brake lines, differentials, all lines and hoses, fuel tanks, air conditioning units and window washing fluid tanks. **Remove and capture refrigerants.**
- 🔧 **Remove** used engines through the hood. Do not tip vehicles on their sides. This allows fluids to run out and spill on the ground.
- 🔧 **Situate** vehicles off the ground in an organized fashion on some form of secondary containment. (Gravel-covered concrete is a form of secondary containment. Secondary containment is needed.)



Crusher used to crush properly drained and stripped cars; crusher situated beneath a shed on an impervious surface.

Vehicle Crushers

- ☐ Vehicle crushers and drain racks should be situated on a bermed or self-contained impervious surface, preferably under a roof and protected from the weather. The floor surface should be sloped to contain fluids. Position crushers and drain racks toward the center of the surface or concrete pad rather than along the edge.
- ☐ Mobile crushers should always be situated on an impervious surface or heavy duty plastic sheeting. Containers designed to be fitted to the crusher can help capture fluids.
- ☐ Vehicles should be adequately drained prior to crushing in order to minimize the volume of waste fluids to manage.
- ☐ Maintain disposal receipts from mobile crusher operators for all wastes generated and transported off-site for disposal.

Housekeeping

- ☐ Do not let liquids evaporate.
- ☐ Utilize drip racks, drip tables, screen tables and trays to capture fluids. Drained parts should be stored on a impervious surface and protected from weather.
- ☐ **LABEL** everything with the contents of the container to avoid cross- contamination and to facilitate recycling. (This includes small spray bottles.)
- ☐ Keep all chemicals in **closed, covered or sealed containers**.
- ☐ Always use **funnels or pumps** when transferring or dispensing chemicals.
- ☐ Place a **platform or step** next to storage drums so employees do not have to lift drain pans above their waists.
- ☐ **Maintain** equipment to prevent leaks and spills.
- ☐ Monitor equipment usage.
- ☐ Maintain trash dumpsters on-site and dispose of solid waste regularly.
- ☐ Do not burn or bury solid waste.
- ☐ Recycle at least 50% of the scrap material brought on site.
- ☐ Do not store empty open containers, drums or tanks on site. Recycle/dispose of material regularly.

GENERAL WASTE MANAGEMENT



**Vehicular Fluid Management,
Container Maintenance, Labels, Storage,
Storage Tank Requirements,
Testing/Analytical Waste Determinations,
Inspections & Recordkeeping,
Transport & Disposal, Training**

Clearly labeled gasoline tank, screen filter with lid (lid should be closed between uses), secondary containment system covered by a roof to prevent problems with rainwater in the secondary containment system, and partial walls to allow adequate ventilation.

Vehicular Fluid Management

- ☐ **Drain** and **collect** all fluids on a covered, curbed and sealed concrete area away from any drains.
- ☐ Do not dispose of vehicular fluids down storm drains, in septic tanks, dry wells, sewer systems, dumpsters or on bare ground.
- ☐ Store fluids in **covered** containers protected from weather and on a curbed, impermeable, concrete surface.
- ☐ Maintain spill control material and equipment nearby stored fluids.
- ☐ Check all fluid storage containers on a weekly basis.

Container Maintenance

- ☐ Maintain containers in good condition and routinely inspect for signs of rust, leaks or defects.
- ☐ Prevent leaks, ruptures and the accumulation of rainwater on top of drums.
- ☐ Keep containers **closed** when not actively adding or removing material.
- ☐ Never place incompatible wastes, such as wastes that react with each other, in the same container. (e.g. Do not store acids and bases in the same container.)
- ☐ Wastes must be compatible with the container in which they are being stored. For example, use plastic containers for corrosive wastes.
- ☐ **Label** containers properly.

Container Maintenance *(continued)*

- Leaks or spills must be **stopped, contained, and managed** immediately and the container repaired or replaced.
- Maintain a written log documenting the date and volume of waste placed into designated waste containers.

Labels

- Label every container with the **contents** and type of waste.
- Label every container with whether it is a hazardous waste or a non-hazardous waste.
- Include federal waste code numbers.
- Include the **accumulation start date** (the date when waste was first stored in the container).
- Include your business' **name** and **address**.
- Use the following words on labels for hazardous wastes:

HAZARDOUS WASTE

FEDERAL LAW PROHIBITS IMPROPER DISPOSAL

IF FOUND, PLEASE CONTACT THE NEAREST
POLICE OR PUBLIC SAFETY AUTHORITY OR
THE U.S. ENVIRONMENTAL PROTECTION AGENCY

(Your business's name, address and
manifest document number)

- Use the following words on labels for non-hazardous wastes:

NON-REGULATED WASTE

Optional Information _____

Shipper _____

Address _____

City, State, Zip _____

Proper DOT Shipping Name _____

U.N. or N.A. No. _____

Contents _____

THIS WASTE IS NOT REGULATED BY THE U.S. EPA

Storage

- Store containers in an area protected from weather and on a curbed impermeable surface.
- Separate** characteristic wastes by waste classification: Toxicity, Ignitability, Corrosivity, and Reactivity.
- Don't combine hazardous waste with non-hazardous waste.
- Store ignitable and reactive wastes within property limits, at least 50 feet from property boundaries.
- Store containers of incompatible wastes in separate areas.
- Maintain **aisle space** between containers to allow for inspection for leaks and damage.
- Be aware of allowable **time limits** for storage.

Storage Tank Registration Requirements

Storage tank systems, with specified volumes and contents, are regulated and must be registered with the DEP or your County Environmental Protection Agency. For more information, contact the DEP Storage Tank Regulation Section at (850) 488-3935 or visit their web site at <http://www.dep.state.fl.us/dwm/programs/tanks/>.

- Register underground storage tanks (USTs) larger than 110 gallons that contain petroleum such as motor fuel, new or used oils, new or used transmission fluids, and new or used hydraulic fluids.
- Register aboveground storage tanks (ASTs) larger than 550 gallons that contain petroleum such as motor fuel, new or used oils, new or used transmission fluids, and new or used hydraulic fluids, or hazardous substances.
- Label** tanks and fill pipes with words identifying the contents.
- Assure that the tanks are in compliance with leak detection requirements.
- Assure that the storage tanks meet the appropriate secondary containment requirements.
- Upgrade the tanks to meet spill, overfill and corrosion protection requirements.

- ☐ Notify the DEP-Contracted County immediately (within 24 hours or the close of the next business day) in the event of a discharge of 25 gallons or more.
- ☐ Do not remove, close, or upgrade any regulated storage tank without first notifying the DEP-Contracted County.
- ☐ Keep the secondary containment drain valve **closed** when not in use.
- ☐ Maintain the secondary containment structures by keeping them free of debris.
- ☐ Manage the liquids collected in the secondary containment structures appropriately.
- ☐ Routinely **inspect** the integrity of the secondary containment structures by checking for cracks, holes, etc.
- ☐ Maintain written documentation of secondary containment inspections.
- ☐ Assure financial responsibility and/or provide third party liability and cleanup-remediation insurance.

Transport and Disposal

- ☐ Make sure your transporter and disposal facility have EPA identification numbers.
- ☐ Use manifests for all hazardous wastes shipped offsite.

Testing/Analytical Waste Determinations

Sometimes sending a sample of waste to a laboratory for analysis is the only way to determine if the waste is hazardous. Important tests for vehicle recyclers may include pH, volatile organics, total petroleum hydrocarbons and heavy metals. If you test a waste once, and continue to use the same industrial process, you may apply those test results when designating future batches of the same waste. If testing is necessary, the lab or consultant contracted to conduct the tests must have a DEP CompQAP for sampling/analytical. Contact your DEP District Office for more information. (See back cover). Tests and analytical waste determinations will be referred to as “waste determinations” throughout this Handbook.

Inspections & Recordkeeping

- ☐ **Inspect** containers at least once a week and keep a written log of container inspections.
- ☐ Keep training and inspection records for **3 years**.
- ☐ Keep manifests and shipping receipts for **3 years**.
- ☐ Keep records of lab tests for **3 years**.
- ☐ Keep completed land disposal restriction forms for **3 years**.
- ☐ Get receipts to verify payment for disposal.

Training

- ☐ **Train** all employees to identify, reduce and properly handle wastes.
- ☐ **Train** new employees before they handle hazardous wastes.



VEHICULAR FLUIDS

Antifreeze, Brake Fluid, Gasoline/Diesel, Gear Oil, Power Steering Fluid, Transmission Fluid, Used Oil, Windshield Washing Fluid

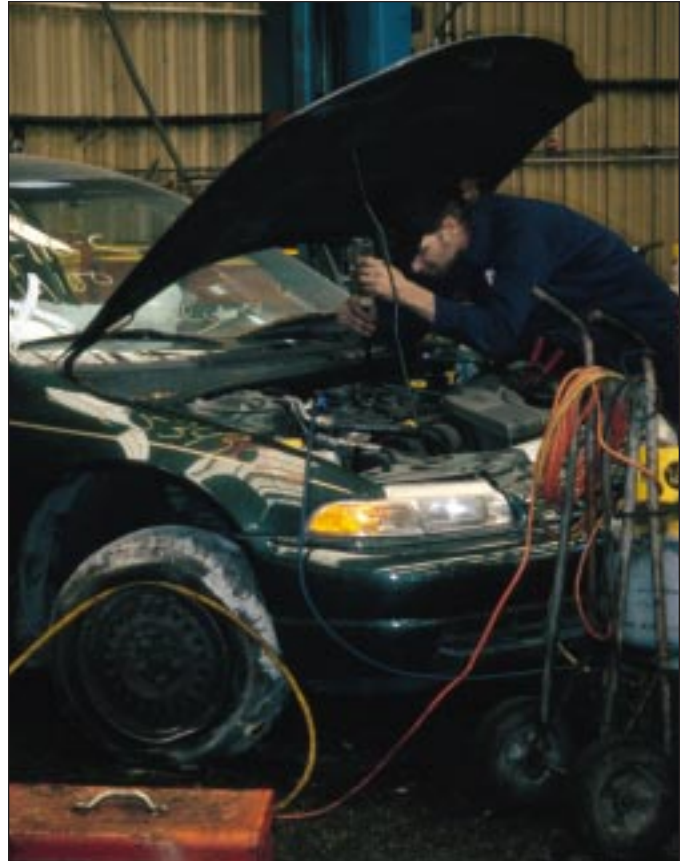
The primary problems at auto salvage yards result from mishandling the vehicular fluids generated from dismantling, crushing or draining fluids from vehicles. Proper management of fluids may prevent spills and leaks, avoid potential clean-up costs, avoid disposal of contaminated soils, and will save money.

Antifreeze

(Fact sheets on antifreeze management are available by request from DEP.)

Antifreeze is exempt from hazardous waste regulations **if it is recycled**. Antifreeze is commonly made up of ethylene glycol, propylene glycol, or another chemical that will transfer heat from a vehicle engine to its radiator. Antifreeze often becomes contaminated with traces of fuel, metal particles and grit. If antifreeze, antifreeze still bottoms, antifreeze filters or antifreeze solids are not recycled, a waste determination must be conducted, **or** the antifreeze can be handled as a hazardous waste to avoid testing costs. Waste antifreeze must be tested at a minimum for lead, benzene, tetrachlorethylene and trichloroethylene using the Toxicity Characteristic Leaching Procedure (TCLP). If determined **hazardous**, used antifreeze must be managed as a hazardous waste. Reusable or recycled antifreeze can be used in facility vehicles, sold or given away. If you use an off-site recycler, you (generator) **MUST ENSURE** that the antifreeze is being recycled!

- ☐ Use separate equipment for the collection of used antifreeze (funnels, pads, storage containers).
- ☐ **Label** used antifreeze collection equipment and containers "**Used Antifreeze.**"
- ☐ Drain antifreeze from radiators and heater cores as soon as possible.



Vehicle undergoing fluid removal on an indoor impervious surface.

- ☐ Keep waste antifreeze free from cross-contamination with other wastes including used oil, fuels, degreasers or radiator flush chemicals.
- ☐ Determine if the antifreeze is waste fluid or reusable and can be recycled.
- ☐ Consider keeping antifreeze in two separate, closed containers: one for antifreeze that cannot be reused marked "**Waste Antifreeze**"; and one marked "**Usable Antifreeze.**"
- ☐ **Label** reconditioned or recycled antifreeze containers "**Reconditioned or Recycled Antifreeze.**"
- ☐ **Label** antifreeze containers with the starting date of accumulation.

- Do not accumulate used antifreeze for longer than 180 days.
- Recycle** by reuse. Methods of processing waste antifreeze include distillation, filtration or ion exchange. Recycling can be done on-site or off-site by an antifreeze recycling service.
- Conduct a waste determination on waste antifreeze filters generated from recycling process equipment, or handle as a hazardous waste.
- Maintain records of used antifreeze shipments and filter management for a minimum of 3 years.
- Maintain a log documenting the volume of waste antifreeze processed through on-site recycling equipment.
- Maintain records of analytical waste determinations and disposal receipts for at least 3 years.

Brake Fluid

Brake fluid becomes hazardous when it is contaminated with chlorinated solvents from spray can brake cleaner. Contact your DEP District office before mixing brake fluid with your used oil. Obtain written permission from your used oil transporter before mixing brake fluid with your used oil. If brake fluid cannot be mixed with your used oil, manage used brake fluid as a separate waste stream, performing a waste determination and disposing of the waste accordingly.

- Do not** spray brake cleaner around containers of brake fluid.
- Do not** dispose of brake fluid down any drain, on the ground or in a dumpster.

Gasoline/Diesel

Facilities may add fuel to its used oil as long as the mixture does not become hazardous for flammability. Prior notification that fuel is added to your used oil should be provided to your used oil hauler. Fuel may also be disposed of as a hazardous waste.

- Remove fuel tanks as soon as possible after the vehicle enters the facility.
- Determine if fuel is reusable or waste fuel.
- Label containers** of reusable fuel clearly: "**Reusable Gasoline**" or "**Reusable Diesel**."

- Manage contaminated fuel in designated containers and **label containers** of waste fuel clearly: "**Waste Fuel**," and apply appropriate hazardous waste labels (See page 6).
- Reusable fuel may be used in facility or employee vehicles.
- Do not mix fuel with any other waste streams, without written permission from your waste hauler.
- Properly dispose of contaminated fuel and maintain the disposal receipts for at least 3 years.

Gear Oil, Power Steering Fluid, Transmission Fluid

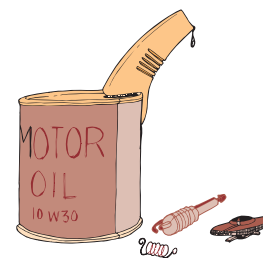
Gear oil, power steering fluid and transmission fluid are not regulated as a hazardous waste if they are recycled. Crude-based petroleum products can be managed like or with your used oil **ONLY IF** they have not been mixed/contaminated with hazardous wastes such as solvents, brake cleaner or carburetor cleaner. Do not dispose of crude-based petroleum products in a storm drain, septic tank, dry well, sewer system or dumpster. Refer to the USED OIL guidelines.

Used Oils

"**Used oil**" is defined as any oil that has been refined from crude oil or synthetic oil that has been used and as a result of such use is contaminated by physical or chemical impurities. Used oil is exempt from hazardous waste regulations if it has not been mixed or contaminated with hazardous wastes, or it is sent for recycling or burned for energy recovery. Proper records must be maintained.

Used oils include but are not limited to the following:

- Cutting oil*
- Transmission fluid
- Lubricating oil
- Gear oil
- Motor oil
- Hydraulic oil
- Differential oil
- Power-steering fluid
- Transaxle fluid



* Some cutting oils and metal working fluids contain chlorinated paraffins and must be managed and recycled separately. Do not mix these with other used oil.

Used Oils *(continued)*

- ⦿ **Label** containers properly: “**Used Oil**”
- ⦿ Fill pipes used to transfer used oil into underground storage tanks (USTs) must be labeled “**Used Oil.**”
- ⦿ Used oils can be mixed together and stored in the same container for collection by a state registered used oil transporter.
- ⦿ Do not accidentally contaminate your used oil with even small amounts of brake cleaner, carb cleaner, or solvents. Even small amounts of chlorinated solvents turn recyclable used oil into a hazardous waste.
- ⦿ Do not mix antifreeze, solvents, gasoline, degreasers, paint or anything else with used oil, without written permission from your used oil hauler.
- ⦿ Do not pour used oil on the ground or use for weed control.

- ⦿ Do not mix used oil with other solid waste destined for a landfill.
- ⦿ Used oil may be recycled by recovery and re-refining by a state permitted used oil processor. Approved used oil transporters must be registered with the state. Check with your DEP District Office for a list of approved used oil/used oil filter transporters and processors.

Windshield Washing Fluid

Although window washing fluid is mainly alcohol, water and detergent, it may contain small amounts of antifreeze. Manage windshield washing fluid as a separate waste stream.

- ⦿ Reuse window washing fluid in facility or employee vehicles.
- ⦿ Sell or give away reclaimed window washing fluid to customers.



FILTERS

Fuel Filters, Transmission Filters, Used Oil Filters

Fuel Filters

Most fuel filters should be handled as hazardous waste and disposed of accordingly (See General Waste Management Section). Some landfills will take used non-hazardous fuel filters if the are punctured and drained for 24 hours. Check with your local landfill for information.

- ☐ Drain excess fuel from filters into a proper fuel container.
- ☐ Accumulate used fuel filters in a separate, fire-proof container marked "**Used Fuel Filters**."
- ☐ Metal fuel filters can be handled with used oil filters if the filters are drained and dry.
- ☐ Glass filters should be managed separately and require a waste determination.
- ☐ Glass filters that are determined to be non-hazardous can be disposed of in a dumpster or recycled with other glass.

Transmission Filters

Transmission filters should be handled with used oil filters **ONLY** with prior approval from the used oil filter hauler, otherwise, manage used transmission filters as a separate waste stream. Follow the used oil filter guidelines for managing used transmission filters as a separate waste stream. Transmission filters are exempt from state hazardous waste requirements if they are recycled or properly managed for disposal. Refer to the USED OIL FILTER guidelines.

Used Oil Filters

Used oil filters can be recycled through a state registered used oil filter processor. Florida Statutes do not allow disposal of used oil/transmission filters in a landfill or in any trash destined for a landfill. If your local disposal company sends its collected refuse to a waste to energy plant (an incinerator used to burn municipal solid waste and make electricity) , you may be able to obtain written permission to dispose of your drained, used oil/transmission filters in the trash. Used oil filters may be recycled as scrap metal by a used oil filter processor. Many used oil disposal companies will also handle used oil filters. Approved used oil filter processors must be registered with the state. Check with your DEP District Office for a list of approved used oil/used oil filter transporters and processors.

- ☐ Used oil filters should be punctured and drained for 24 hours prior to disposal.
- ☐ Consider crushing drained filters to reduce costs.
- ☐ Keep drained filters in a separate aboveground container labeled "**Used Oil Filters**".
- ☐ Put oil drained from filters into your "**Used Oil**" container.
- ☐ Maintain storage containers in good condition, indoors, protected from weather or sealed/closed, on an oil-impermeable surface.
- ☐ Do not discard any filters in the dumpster without written permission from your local disposal company.
- ☐ Maintain disposal/recycling receipts for at least 3 years.



REFRIGERANTS

R-134a and CFCs (Freon/R-12, R-22)

Refrigerants (chlorofluorocarbons, or CFCs, and R-134a) are the chemicals used in automotive air conditioning and appliances. Automotive air conditioning accounts for more than 20% of all the CFCs used in this country. CFCs refer to the R-12 (Freon) and R-22 used in air conditioning units. They are a family of chemicals that are stable, non-flammable and non-corrosive. If improperly handled, CFCs can be released to the atmosphere. CFCs drift into the upper atmosphere and destroy the ozone layer that protects the Earth from harmful ultraviolet radiation. CFCs and R-134a are harmful to the climate because they are greenhouse gases.

Refrigerants are processed by using one of these methods:

Recovery — removing refrigerant from air conditioning units and storing it in a container without testing or processing it

Recycling — filtering refrigerants to remove impurities such as oil, air and moisture or

Reclaiming — processing refrigerant, usually by distillation, until all impurities are removed and it meets resale specifications.

It is illegal to knowingly vent refrigerants into the environment during repair, service, maintenance, reclamation, recycling, or disposal of refrigeration and air conditioning equipment. Spent refrigerants that are not reclaimed or recycled and refrigerants used as solvents **are** regulated wastes. Contact the U.S. EPA's Ozone Protection Hotline at (800) 296-1996 for additional information on refrigerants.

- ☉ Refrigerants must be evacuated and recovered prior to crushing vehicles or appliances (white goods).
- ☉ Have certified technicians remove refrigerants from all vehicles using EPA-approved recycling/recovery equipment.
- ☉ Do not evaporate or vent refrigerants to the atmosphere.

- ☉ Maintain records that the refrigerants were recovered on-site, **or**
- ☉ Maintain records that the vehicle/appliance was brought into the facility free of refrigerants and that the refrigerants were removed using the proper methods prior to entering the facility.
- ☉ Store refrigerant in tanks that meet U.S. Department of Transportation (DOT) or Underwriters Laboratory (UL) standards. Label tanks according to their contents: "**Refrigerants.**"
- ☉ Sell refrigerant only to U.S. EPA certified technicians or U.S. EPA authorized reclaiming facilities who will reclaim it to its original purity specifications. Keep records of refrigerant sales.
- ☉ Do not recharge a vehicle's system with recovered refrigerants unless the vehicle is owned by your facility or unless a U.S. EPA certified technician is recharging the vehicles on-site.
- ☉ Dispose of filters from CFC recapture as hazardous waste. Conduct a waste determination on filters from R-134a recapture and dispose of properly.
- ☉ Maintain records documenting the volume and final destination of recovered refrigerants.

***Note: Miami-Dade County has a separate ordinance for the management of waste refrigerants. If you are operating within Miami-Dade County, please contact (305) 372-6925 for more information.

LEAD

Lead Parts, Lead Acid Batteries



Indoor used battery recharge area, batteries stored or recharged on wood shelving, over an impervious surface, recharge areas should be well ventilated (wood shelving does not corrode).

Lead Acid Batteries

Spent lead acid batteries contain lead and corrosive acids which are considered hazardous waste. Lead acid batteries are exempt from hazardous waste regulations if recycled or returned to a battery manufacturer and documentation is maintained, otherwise, lead acid batteries must be managed as a hazardous waste. Batteries pose a potential threat to human health and the environment if improperly discarded.

- ❑ Remove batteries before crushing any vehicles.
- ❑ Test batteries to determine usability or resale quality.
- ❑ If lead acid batteries are recharged for resale, remove lead cable ends from batteries, store lead parts in a covered container that is strong enough to hold the weight of the lead and recycle the lead with a reputable recycler.
- ❑ If spent lead acid batteries are going to be recycled as scrap batteries, leave lead battery cable ends attached to the scrap batteries.
- ❑ Check batteries for leaks, cracks, etc. prior to storing.
- ❑ Place cracked or leaking batteries in a closed, watertight, acid resistant storage container.
- ❑ Store batteries upright, on wooden pallets, in a secure, **covered** location, on a bermed impermeable surface or in watertight, acid resistant containers.
- ❑ Do not pile batteries higher than 4 batteries high.

- ❑ Keep spill control equipment near batteries to neutralize any acid release (e.g. baking soda, lime).
- ❑ Do not place lead acid batteries in the garbage or incinerate batteries.
- ❑ Do not pour battery acid on the ground or into a drain.
- ❑ Ensure that battery cores are distributed to a battery wholesaler/retailer, a permitted secondary lead smelter, a collection center or a reputable recycler.
- ❑ Maintain recycling or disposal receipts for at least 3 years.

Lead Parts

The amount of lead found in a single BB or shotgun pellet is enough to contaminate an entire truckload of auto fluff, making it hazardous waste and requiring costly disposal.

- ❑ Remove lead tire weights and battery cable ends before crushing vehicles. Battery cable ends may be left on usable batteries and recycled along with the batteries.
- ❑ Remove other known sources of lead from vehicles when practical.
- ❑ Store lead parts in a covered container that is strong enough to hold the weight of the lead.
- ❑ Recycle lead parts with a metals or battery recycler.



Plastic wrapped lead acid batteries piled less than 4-high on a pallet, on an indoor impervious surface, notice the use of cardboard between layers of batteries.

MERCURY

Flourescent Lamps and High Intensity Discharge Lamps, Mercury Switches

(A list of mercury recyclers can be obtained by request from the DEP.)

Flourescent and High Intensity Discharge Lamps

Spent lamps from businesses have been banned from solid waste incineration since 7/1/94. Businesses generating less than 10 lamps per month may dispose of the lamps in the trash **ONLY** if the lamps are destined for a landfill **AND** with prior approval from the landfill. Local solid waste departments are the final authority for landfill disposal and may refuse to accept any spent lamps from generators.

- ☐ Conduct a waste determination on spent lamps if you choose not to recycle your lamps.
- ☐ To recycle lamps, store them in a manner that prevents them from breaking, and label each container with "**Spent Mercury-Containing Lamps**."
- ☐ Lamps destined for recycling do not count towards a facility's hazardous waste generator status, if properly managed.
- ☐ Businesses are allowed to store up to 5,000 kilograms of lamps (20,000 lamps) for up to one year if the lamps are destined for recycling. You must contact the DEP for permission to store more than 5,000 kilograms of lamps
- ☐ Be able to demonstrate that you have not had the lamps stored for more than one year. This can be done by keeping a log, shipping papers, or by **labeling** storage containers with the **accumulation start date**.
- ☐ Do not break or crush lamps.
- ☐ Maintain records of analytical waste determinations, shipping papers, disposal or recycling receipts for at least 3 years.

Automotive Applications of Mercury

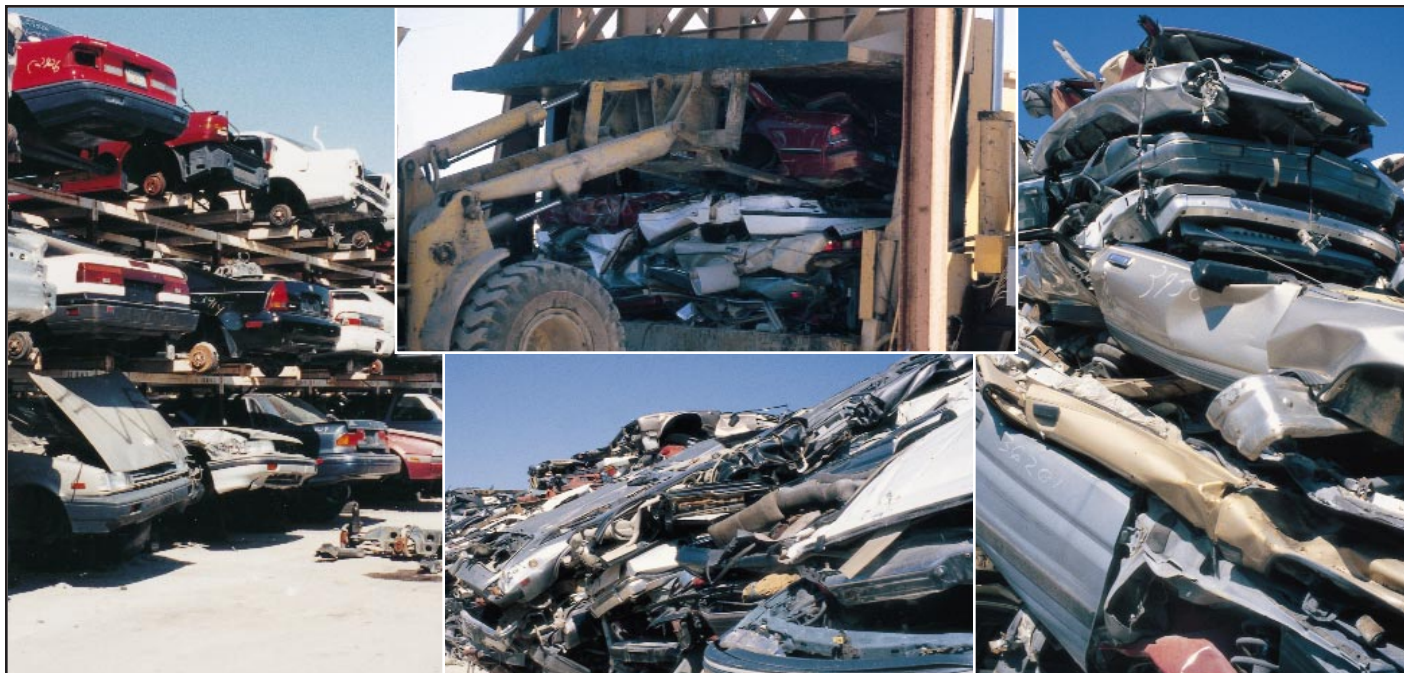
- ☞ Mercury Tilt Switches used on underhood and trunk lighting
- ☞ Four Wheel Drive Anti-Lock Braking Systems, usually 3 per vehicle
- ☞ Active Ride Control or Ride Leveling Sensor, 2 to 4 mercury switches used to adjust suspension on cornering events
- ☞ High Intensity Discharge Systems, headlights and tail lamps
- ☞ Virtual Image Instrument Panel

Mercury Switches

Mercury is a highly toxic metal often found in several automotive applications. Once released into the environment, mercury cannot be eliminated. For more information on automotive applications of mercury or for a list of automobile makes and models that contain mercury switches, a copy of the "Draft Wisconsin Mercury Sourcebook: Automotive" is available at <http://www.epa.gov/glnpo/bns/hgsbook/>.

- ☐ Remove all mercury switches from the vehicle as soon as possible.
- ☐ Be careful not to break or puncture the mercury container during removal.
- ☐ Store mercury switches in a leak-proof, closed container. Store in a way that will prevent the capsules from breaking.
- ☐ **Label** storage containers with "**Spent Mercury-Containing Devices for Recycling**" or "**Waste/Used Mercury Devices**."
- ☐ Be able to demonstrate that you have not had the devices stored for more than one year. This can be done by keeping a log, shipping papers, or by **labeling** storage containers with the **accumulation start date**.
- ☐ Recycle mercury switches with a licensed metals recycler that reclaims mercury.

SCRAP METAL



Parts, Smelters/Reclaiming Furnaces

Businesses are responsible for assuring its wastes are managed and disposed of properly, from cradle to grave. Facilities must demonstrate that at least 50% of the material received on-site is recycled annually. Be sure to use reputable scrap dealers only.

- ⦿ Catalytic converters may be removed prior to crushing and recycled for their platinum content.
- ⦿ Obtain an (air) Operating Permit or Exemption to operate a smelter or reclaiming furnace on-site.
- ⦿ Do not operate a smelter in a manner allowing wastes or wastewater to impact soil.
- ⦿ Conduct waste determinations on wastes generated from the smelter, (i.e. wastewater, ash, slag, sludge) and manage appropriately.
- ⦿ Maintain a written log documenting the date and volume of waste placed into designated waste containers.
- ⦿ Maintain records of analytical waste determinations and disposal/recycling receipts for at least 3 years.
- ⦿ Maintain receipts for all scrap metal shipped off-site (including vehicles for shredding) for at least 3 years.

WASTE TIRES



Used tires stored on indoor racks tagged for resale.

Tire products include:

- ☞ Fuel for combustion at power plants, tire plants, cement plants, pulp and paper mills, and more.
- ☞ Crumb rubber for use as pavement/floor mats, vehicle mud guards, adhesives, playground gravel substitute, sludge composting, split tire products, backfill, landfill leachate collection systems and daily cell cover, septic-system leach fields, filler in new tires, sports surfaces, railroad crossings, and belt covers.
- ☞ Whole tires are used as playground equipment, erosion control media, highway crash barriers, tires for low speed non-road farm equipment, stock feeders, and cover weights.

Waste Tires

In landfills, tires take up a large amount of space, harbor rodents, and collect gases. Illegally dumped tires or tire piles can pose health hazards by providing a breeding ground for mosquito infestation and the potential for fires. Citrus oil or baking soda can be used to kill larvae in water collecting in tires.

- ☞ Store waste tires indoors or outdoors with a cover to prevent the collection of standing water and to prevent mosquito larvae from thriving.
- ☞ If tires cannot be processed in a timely manner, leave tires on the rims to avoid problems with the mosquitoes until the tires can be managed properly.
- ☞ Do not accumulate more than 1,500 tires on site without a permit from the DEP.
- ☞ Do not burn or bury waste tires.
- ☞ Transport stored waste tires regularly to prevent large accumulations.
- ☞ All haulers of over 25 tires must register with the DEP; use only vendors registered with the DEP.
- ☞ Dispose of waste tires at a permitted or DEP approved facility.
- ☞ Maintain disposal/recycling receipts for at least 3 years.

More than 50% of the nation's rubber supply is used to make tires. About 242 million tires are scrapped in the United States each year. Up to 80% of tires are now retreaded, recycled, or used as fuel.

CLEANING SOLUTIONS



A – Wash table for engine parts over an impervious surface draining to an oil-water separator; **B** – Wastewater capture, recycle and reuse storage system, notice the secondary containment system, and the blue metal post angle to prevent damage from large machinery, a roof over the secondary containment system would reduce problems with rainwater, the tanks should be labeled with the materials contained therein.

Aqueous Parts Washers/Wastewater Management, Hot Tank Solutions, Parts Washers, Pressure Washing, Sump Sludge

(See Page 32 for waste reduction and pollution prevention BMPs for cleaning solution waste.)
Waste fluid and sludge generated from cleaning salvaged parts may be hazardous wastes.

Aqueous Parts Washers/ Wastewater Management

Aqueous parts washers provide environmental benefits because they do not use solvents that contain volatile hydrocarbons. However, some precautions must be taken concerning disposal of wastewater, sludge (see section on sump sludge), and filters. Wastewater is water that has been used for a purpose such as engine cleaning and is destined for disposal. All process wastewater should go to a sanitary sewer which goes to a publicly owned treatment works (POTW) and not to any other type of drain such, as a stormwater drain or septic system. Check with your local sewage plant for information on discharge limits and to obtain a discharge permit if required. Find out where the drains in your shop lead.

- ☉ Use either an on-site capture and reuse system for wastewater or have a connection to a city sewer and wastewater treatment facility with the proper permitting. The city sewer plant must be a publicly owned treatment works facility (POTW).
- ☉ Notify and get written approval from the sanitary sewer system prior to discharging any wastewater.
- ☉ Floor cleaning waste water may be contaminated with heavy metals and grease that need to be treated before discharging to the sewer. If not contaminated, the water may go to an oil/water separator (or another appropriate system) and then the sanitary sewer.
- ☉ Keep floors clean to begin with. Catch leaks before they hit the floor.
- ☉ Recycle floor mop water into cabinet washers.
- ☉ Steam cleaning, pressure washing and spray cabinet wastewater should go to an oil/water separator (or another appropriate system) before discharging to the sanitary sewer.
- ☉ Recirculate and reuse water until unusable.
- ☉ Do not dispose of spent parts washer fluids on the ground, down a drain, or in a dumpster.

Aqueous Parts Washers/ Wastewater Management *(continued)*

- ❑ Conduct a waste determination on spent parts washer fluid and filters and dispose of properly.
- ❑ Maintain a written log documenting the date and volume of the waste placed into designated waste containers.
- ❑ Maintain records of analytical waste determinations and disposal receipts for 3 years.

Hot Tank Solutions

A solution of caustic (alkaline) cleaners and water is commonly used in tanks for cleaning engines and parts. Spent solution and sludge may be hazardous due to corrosivity ($\text{pH} \geq 12.5$) or elevated metallic content.

- ❑ Accumulate spent cleaning solution and sludge removed from hot tanks in closed, labeled containers that are compatible with the waste placed in them.
- ❑ Maintain a written log documenting the date and volume of the waste placed into designated waste containers.
- ❑ Conduct a waste determination on spent solution and sludge and dispose of properly.
- ❑ Maintain records of analytical waste determinations and disposal receipts for 3 years.
- ❑ Notify and get written approval from the sanitary sewer system prior to discharging any wastewater.



Enclosed parts washers reduce vapor emissions during the washing process.

Parts Washers

Mineral spirits, Stoddard solution, petroleum naphtha, gasoline, kerosene, or diesel fuel may be hazardous due to ignitability, while other solvents may be toxic if they contain toluene, methyl ethyl ketone (MEK) or 1,1,1-trichloroethane. Spent parts washer fluids may also be hazardous due to elevated metal content from oils and greases.

Mineral spirits, Stoddard solution, and petroleum naphtha may be placed in your used oil with prior approval from your used oil hauler, if you do not cause the resulting mixture to become hazardous.



Engine parts situated on a drain rack within a parts washer.

- ❑ Do not dispose of spent parts washer fluids on the ground, into drains, or by evaporating to the air.
- ❑ Do not use aerosol spray cans near your parts washers.
- ❑ Conduct a waste determination on spent parts washer fluid, sludge and filters and dispose of properly.
- ❑ Maintain a written log documenting the date and volume of the waste placed into designated waste containers.
- ❑ Maintain records of analytical waste determinations and disposal receipts for 3 years.

Pressure Washing

Pressure washing should be practiced on a containment pad with wastewater controls. Wastewater may contain heavy metals and greases, which if improperly managed, could contaminate soil and/or groundwater.

- ❑ Pressure wash parts and engines over a contained, impervious surface such as a wash table that drains to an oil water separator.
- ❑ Do not allow wastewater, oils or greases on the ground.
- ❑ Do not allow wastes to flow into a septic tank or a drain leading to a ditch, stream, lake or dry well.

- ☐ Check with your local sewer utility to verify that drains in your pressure washing containment area are connected to a sanitary sewer system that is a public owned treatment works facility (POTW).
- ☐ Notify and receive written authorization prior to discharging wastewater to a sanitary sewer system.
- ☐ Maintain an oil/water separation system or sump regularly.
- ☐ Equip the oil/water separator with an emergency shut-off to prevent spills from entering the sewer, or discharging directly to surface waters.
- ☐ Conduct a waste determination on spent liquids and sludge and dispose of properly.
- ☐ Maintain a written log documenting the date and volume of the waste placed into designated waste containers.
- ☐ Maintain records of analytical waste determinations and disposal receipts for 3 years.

Sump Sludges

Sludges from your sump or oil/water separator may be hazardous waste. You will need to conduct a waste determination on sludge at a certified laboratory to determine if it is hazardous, or save testing costs and assume the waste is hazardous and manage it accordingly.

- ☐ If sludge tests as a hazardous waste, manage as a hazardous waste and dispose of the sludge through a hazardous waste management facility.
- ☐ Do not put hazardous sludge in the dumpster or on the ground.
- ☐ Do not use a septic tank pumping service to dispose of sludge. There is no legal, environmentally safe way for these services to dispose of the waste if it is a hazardous waste.
- ☐ Maintain records of analytical waste determinations for 3 years.

CLEANERS

Brake and Carburetor Cleaner, Solvents

Almost all solvents used for degreasing purposes are regulated, and if managed incorrectly, can be a source of pollution to the environment. Businesses are encouraged to reduce or eliminate solvent use whenever possible.

Brake and Carburetor Cleaners

Brake and carburetor cleaners usually contain chlorinated solvents which are regulated. If improperly used, they can contaminate non-hazardous wastes at your business such as used oil or transmission fluid.

- ☐ Keep containers of brake and carburetor cleaner closed when not in use.
- ☐ Do not mix brake/carburetor cleaners with other solvents, i.e. solvents from parts washers.
- ☐ Collect spent brake or carburetor cleaner and residue in designated waste containers.
- ☐ Do not dispose of cleaners down any drain, septic system, dry well, dumpster or on the ground
- ☐ Conduct a waste determination on spent cleaners and dispose of properly.
- ☐ Maintain records of analytical waste determinations and disposal receipts for at least 3 years.

Solvents

- ☐ Read product labels and MSDSs to determine if a product contains hazardous solvents.
- ☐ Purchase and use non-chlorinated aerosol solvents.
- ☐ Do not mix solvents.
- ☐ Do not discharge any solvent into a septic tank, sanitary or storm drain, surface water or the ground.
- ☐ Keep containers and solvents sinks closed when not in use.
- ☐ Conduct a waste determination on spent solvents and dispose of properly.
- ☐ Maintain records of analytical waste determinations and disposal receipts for at least 3 years.

OTHER VEHICULAR WASTES

Air Bags, Asbestos, Glass, Paint and Body Shop Wastes, Plastics

Air Bags

Most new cars come equipped with air bags. The propellant used in air bags is sodium azide, a hazardous substance which is dangerous if inhaled and may burn exposed skin. Air bags that have been deployed do not pose a risk to human health or the environment and should be left in vehicles.

- Remove all unused air bag units when vehicles enter the facility.
- Store undeployed air bag units indoors, protected from the weather until they can be resold.

Asbestos

Under the Toxic Substances Control Act (TSCA), asbestos, if airborne, has been declared hazardous to human health. Brake shoes and clutches are not typically removed for reuse in vehicle recycling and are crushed with the vehicle. This may pose a significant problem at the shredder site where fine asbestos particles become airborne. Human health may also be impacted during their transportation to the landfill.

If you do remove brake shoes and clutches at your business, you have the potential to be exposed to asbestos dust. Dispose of asbestos waste according to federal and local regulations. Call your nearest DEP District Office for further information.

Until the use of asbestos products is phased out, the best way of limiting exposure and health damage to workers is to use proper controls, containing brake dust and preventing its release in the air. A free copy of "Guidance for Preventing Asbestos Disease Among Auto Mechanics" (order # EPA745K93026), can be obtained by calling the EPA's Toxic Substances Control Act Assistance Information Service at (202) 554-1404 or by emailing your request to tsca-hotline@epa.gov.

Employee lockers, change area and laundry bin provided within shed for laundering of work clothing. Be certain that your laundry service is connected to a publicly owned treatment works facility (POTW).

- Do not clean brakes or clutches with air hoses, dry brushes, wet brushes, rags, garden hose, liquid squirt bottles, solvent spray or ordinary shop vacs.
- If you clean brakes or clutch assemblies, use a special "HEPA" filter vacuum cleaner.
- If you remove brake shoes or clutches, use specially designed low pressure spray equipment that wets down brake or clutch dust and properly catches the run-off, this may prevent some asbestos from being released in the garage.
- Asbestos waste should be placed in a heavy plastic bag, double bagged, double tied, and stored in a leak proof, airtight container designated for asbestos waste.
- Do not eat, smoke or drink in asbestos work areas.
- Wash thoroughly before eating or going home.
- Change into clean clothes before going home. Do not take work clothing home. Asbestos particles can become embedded in clothing and carried home.

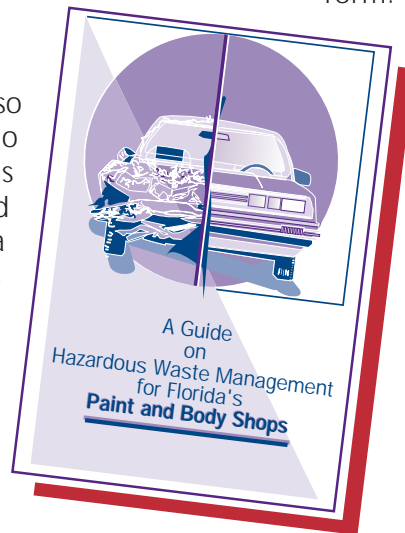


Glass

Automotive windshield glass is typically manufactured with two layers of glass and a sheet of clear plastic membrane in between. Because of this layering, recycling options for automotive windshield glass are limited. In addition, automotive glass has a different chemical composition from container glass.

Paint and Body Shop Wastes

If your vehicle recycling facility also does auto body work, you need to consider those waste streams associated with body work and painting. Contact the DEP for a copy of "A Guide on Hazardous Waste Management for Florida's Paint and Body Shops."



Plastics

Recycling of plastics saves 90% of the energy over its primary production energy use. Unfortunately, plastics are made of many different materials which are not compatible with each other and cannot be recycled to high value products as mixed plastics. For successful recycling, materials must be separated in their pure form. To date, there is no real market for plastics recovered from used automobiles. Industry is trying to incorporate recyclability at the design stage in order to create eventual markets for recycled plastics recovered from the automotive industry. Check with your local recycling firm for plastic recycling options.

PROCESS AUTO SALVAGE WASTES

**Absorbents, Aerosol Spray Cans, Air Emissions/
Toxic Air Pollutants/Volatile Organic Compounds,
Contaminated Soil, Dust, Empty Containers, Shop Towels**

Absorbents: Granular (Kitty Litter), Foam Pads, Booms (Pigs)

Absorbent is used frequently to clean up spills and leaks. Check with your solid waste authority whether you may dispose of your oily wastes in the trash dumpster.

- ☉ Maintain absorbent material in areas where fluids are generated, managed or stored.
- ☉ Soak up leaks and spills as soon as they occur and remove them in a timely manner.
- ☉ Manage absorbent that comes in contact with hazardous waste as a hazardous waste.
- ☉ Do not mix spent non-hazardous absorbent with spent hazardous absorbent.
- ☉ Do not put spent absorbent in drains, on the ground, or in vehicles to be crushed or shredded.
- ☉ Maintain written verification from your solid waste hauler regarding the disposal of absorbent in the dumpster.
- ☉ Maintain records of analytical waste determinations and disposal receipts for at least 3 years.



Aerosol Spray Cans

Partially empty spray cans may be regulated as hazardous waste if discarded because they contain ignitable propellants or chlorinated solvents. Empty spray cans are exempt from hazardous waste regulations and can be recycled as scrap metal. **Please Note:** An aerosol can that is empty of product, may still contain propellant. The aerosol can is still reactive (hazardous) until the propellant is completely discharged.

- ☉ Use the entire spray can before starting another, and empty cans completely before discarding.

- ☉ If a spray can malfunctions, handle as a hazardous waste or consider returning it to your supplier.
- ☉ Do not spray in/or around other solvents, waste or open containers to prevent contamination.
- ☉ Never spray a product in the air in lieu of proper disposal.
- ☉ Collect and conduct waste determinations on spray cans which are not empty.
- ☉ Maintain records of analytical waste determinations and disposal receipts for at least 3 years.

Air Emissions, Toxic Air Pollutants, and VOCs (Volatile Organic Compounds)

These emissions may result from running engines, volatilization of gasoline and solvents, CFCs from air conditioning units, airborne substances from spray cans or cutting and welding during dismantling and cleaning. A permit from your state, local county or city air program may be necessary if you generate hazardous, toxic or odorous air emissions. Try to control hazardous emissions at the source: keep drums, containers and washers covered and turned off when not in use.

Contaminated Soil

At some facilities, soil has become contaminated by past or ongoing vehicle handling practices. The severity of the contamination will depend on such factors as the toxicity of the pollutant, total cumulative fluid loss to the ground and spill cleanup procedures. Improving daily work practices can alleviate the cost to remediate and dispose of contaminated soils.

- ☉ Prevent spills before they happen. Cleanup spills as soon as they happen or are discovered (See Page 27).
- ☉ Excavate contaminated soil as spills and leaks occur to prevent migration of the contamination.

- ☐ Collect the soil in appropriate, labeled containers and store the containers on a covered, impermeable containment area until it can be cleaned or transported to a waste treatment facility.
- ☐ Do not dispose of contaminated soil in vehicles to be crushed or shredded.
- ☐ Do not store contaminated soils for an indefinite amount of time. Dispose of contaminated soil promptly to avoid additional contamination.
- ☐ Contact used oil haulers, soil thermal treatment facilities, hazardous waste transporters, and your local municipal solid waste landfill or incinerator concerning the disposal of contaminated soil.
- ☐ Conduct a waste determination on the soil prior to its disposal.
- ☐ Maintain records of analytical waste determinations and disposal receipts for at least 3 years.

Dust

Listed below are some techniques to prevent and suppress dust.

- ☐ Surface apply chemical suppressants to non-traveled areas. **Used oil cannot be used for this purpose.**
- ☐ Vegetate or mulch areas that don't receive traffic.
- ☐ Apply gravel or rock, or pave areas.
- ☐ Do not clear more vegetation than is necessary to provide ample work areas.
- ☐ Construct natural or artificial wind breaks or wind screens.
- ☐ Lower speed limits on roads.
- ☐ Cover piles to protect from wind.



Empty Containers

An empty container is one that has had all contents removed by normal practical means, such as inverting and draining, shaking, scraping or scooping. Make sure that the compressed gas pressure inside the container is equal, or nearly equal to the pressure outside the container. After all these methods have been utilized, the container can be crushed, punctured or shredded and discarded as scrap metal or garbage.

Shop Towels

Dirty rags are exempt from regulation if managed correctly and picked up for laundering by an industrial rag/laundry service which is connected to a publicly owned treatment works facility (POTW). If a rag service is not used, then you must determine that your rags are not hazardous before putting them in the trash.

- ☐ Try not to use disposable towels. If possible, use cloth towels from an industrial laundry service discharging its wastewater into a public sewer system.
- ☐ When possible use non-chlorinated or low VOC cleaning compounds. Using chlorinated solvents will cause the rags to be a hazardous waste.
- ☐ Do not dispose of solvents by pouring them onto rags or into containers of used shop towels.
- ☐ Do not throw dirty wipes, paper towels or rags into the dumpster if they have come into contact with hazardous solvents or waste.
- ☐ Liquid petroleum wastes should not be draining from towels placed into the trash.
- ☐ Do not dispose of dirty shop towels in vehicles to be crushed or shredded.
- ☐ Keep waste shop towels in a closed, fireproof container labeled "**Used Shop Towels.**"
- ☐ Maintain records of analytical waste determinations and disposal receipts for at least 3 years.

IDENTIFYING YOUR HAZARDOUS WASTES

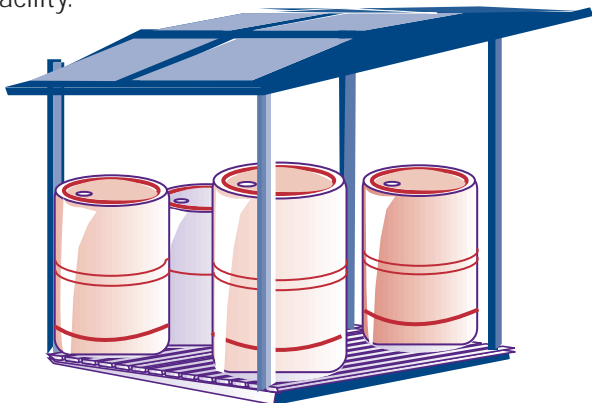
Once it has been determined that a material is destined for disposal, it is classified as a waste. If this determination has been made, it is very important to determine whether the waste is hazardous or non-hazardous. There are several ways to identify hazardous wastes.

- Obtain and read Material Safety Data Sheets (MSDS), (See Page 26).
- Talk to product suppliers and manufacturers.
- Read product labels.
- Compare product to hazardous waste characteristics and to wastes listed in federal regulations (See Page 25).

- If product information is not available or is inconclusive, have a commercial lab sample and test the waste using the Toxicity Characteristic Leaching Procedure (TCLP), (See Page 7).
- A non-hazardous material or product may become a hazardous waste due to contaminants added during use. Lab testing may be necessary to determine whether or not the waste is hazardous. This is called an "analytical waste determination." (See Page 7.)

GENERATOR STATUS

The Hazardous Waste regulations that apply to your facility are determined by the amount of hazardous waste that is generated in a calendar month or is stored on site. **If you generate greater than 220 lbs/100 kg** of hazardous waste in a calendar month, you must apply for an U.S. EPA Identification number. Contact your DEP District office for an application and additional information on regulations that apply to your facility.



If you generate less than 220lbs/100kg of hazardous waste per month (about half a drum), you are a "**Conditionally Exempt Small Quantity Generators (CESQG).**"

1. **Evaluate** your hazardous wastes and ensure proper disposal of all wastes.
2. **Determine** Generator Size.
3. **Record Keeping.** Keep records of waste disposal.

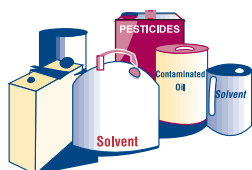
For additional information on Small Quantity Generator requirements contact the DEP Small Quantity Generator Coordinator at (850) 488-0300 for a copy of "Fact Sheet: Requirements for Conditionally Exempt Small Quantity Generators of Hazardous Waste," "Fact Sheet: Requirements for Small Quantity Generators of Hazardous Waste" or "Florida's Handbook for Small Quantity Generators of Hazardous Waste."

IDENTIFYING WASTES

A **hazardous waste** is a solid, liquid or gaseous material with certain properties that could cause injury or death to a person, or could damage and pollute land, air, surface water or groundwater. Some wastes are specifically **listed** in "Identification and Listing of Hazardous Wastes," 40 CFR Part 261. Other wastes may be regulated because they exhibit certain **characteristics** (ignitability, corrosivity, reactivity, toxicity). The Code of Federal Regulations is available online at <http://www.access.gpo.gov/nara/cfr>, or information can be obtained by calling the RCRA Hotline at (800) 424-9346.

Major Category	Hazardous Waste Type	Vehicle Recycler Examples
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Listed Wastes



Discarded Chemical Products are unused, discarded, pure substances that have only one active ingredient.

Pesticides
Unrinsed containers
(Discarded chemicals may not be generated by vehicle recyclers)

Hazardous Wastes are from specific industry sources such as plating, and generic activities (such as degreasing).

Chlorinated solvents
Contaminated oil
F Solvents

Characteristic Wastes



Ignitable wastes are easily combustible or flammable. If they have a flashpoint of less than 140 degrees Fahrenheit or an alcohol content of 24% or more, they are hazardous wastes.

Spent solvents
Solvent still bottoms
Mineral Spirits
Waste oil-based paints
Waste gasoline



Corrosive wastes corrode metals or other materials or burn the skin. These liquids have a $\text{pH} \leq 2$ or a $\text{pH} \geq 12.5$.

Acid from lead acid batteries
Acids/Bases



Reactive wastes are unstable and may explode or react rapidly or violently with water or other materials.

Sodium azide in
undeployed air bags



Toxic wastes contain certain toxic organic chemicals or certain heavy metals, such as chromium, lead, mercury, or cadmium.

Sludges
Heavy metals
Waste gasoline
Spray cabinet wash water
(possible)

WASTE HANDLING

Emergency Planning and Community Right-to-Know Act, Material Safety Data Sheets, OSHA Compliance

It is recommended that waste streams not be mixed. Mixing means fewer recycling opportunities or reuse options and more expensive management costs. Mixing wastes might even cause a chemical reaction that could produce an explosion or toxic gases.

Also, please remember - **Label, Label, Label!**

Emergency Planning and Community Right-to-Know Act (EPCRA)

Title III of the Superfund Amendments and Reauthorization Act (SARA) sets the procedures for government and industry emergency response planning. It also establishes the guidelines for apprising the community-at-large on the hazardous chemicals in their community. Many hazardous waste generators have requirements under EPCRA. For more information on the programs governed by these acts call (800) 424-9346 or (800) 535-0202. The "SARA Title III Fact Sheet—Emergency Planning and Community Right-to-Know Act" is available at:

<http://www.epa.gov/swercepp/factsheets/epcra-fs.txt>.

Material Safety Data Sheets (MSDS)

A material safety data sheet should accompany each of the chemical products you purchase from a manufacturer or vendor. They are used to relay chemical hazard information. As a business, you are required to keep MSDSs for all products available to employees. The ability to scan through an MSDS and pick out the following information is important. MSDSs are valuable because they describe:

- ☞ The physical and chemical properties of the hazardous substances contained in the product,
- ☞ Spill cleanup instructions,
- ☞ Health hazards and appropriate first aid,
- ☞ Fire and explosion hazards, **and**
- ☞ Proper management and disposal practices.

An MSDS file should be maintained at the workplace. It should be located so that all employees have easy access. If you keep MSDSs on file in a computer, a hard copy should also be available in the event of a computer failure or loss of electrical power.

Indicate to your employees how and where your MSDSs are to be located and any access procedures necessary. Assign someone the responsibility to obtain, maintain and update MSDS information.

OSHA Compliance

Small business owners have a variety of problems in dealing with workplace safety and health hazards. It is important for business owners to establish their own safety and health programs in order to minimize worker injury and illness. For more information contact the Occupational Safety and Health Administration at: (800) 321-6742 or the Florida Department of Labor at: (850) 488-3044. The "OSHA Handbook for Small Businesses" is available at:

<http://www.osha-slc.gov/Publications/Osha2209.pdf>.



SPILLS AND LEAKS

Be Prepared – Spill Control

Spill Prevention

- ☐ Confine inspection, draining and dismantling of vehicles to one area.
- ☐ Drain vehicles, parts, and cores as soon as possible after vehicles come in.
- ☐ Dismantle vehicles, parts and cores on a curbed, impermeable, concrete surface with drip pans and absorbent materials.
- ☐ Plug engine and all hoses after draining.
- ☐ Place all fluids in proper storage containers immediately after draining.
- ☐ Store vehicles, parts and cores with proper spill containment.
- ☐ Secondary spill containment efforts must be large enough to contain the maximum volume of fluid that could be spilled from the largest container in the area.
- ☐ Clean up small spills right away. Use the smallest amount of absorbent possible or drain into a sump or oil/ water separator.
- ☐ Store all used absorbents in closed, covered leak-proof containers. Dispose of used absorbents properly - launder, burn for energy recovery, or test and properly manage either as solid or hazardous waste (per test results).
- ☐ Store all waste fluids in closed containers to prevent spills. Close tightly to prevent evaporation, and check levels daily.
- ☐ Inspect containers regularly for leaks.
- ☐ Develop a maintenance plan for all facility equipment, such as crushers, forklifts and hydraulic lifts. Keep them well maintained, free of leaks and problems.
- ☐ Clean crusher regularly by wiping off accumulated grease and oil - this prevents runoff.
- ☐ Do not crush vehicles on unprotected ground.
- ☐ Keep spill control equipment/absorbent materials in a central location, accessible to all employees.
- ☐ Train all employees to quickly respond to different kinds of spills.

Spill Control Equipment

- ☞ Fire extinguishers are required in all vehicle recycling buildings. They should be kept where any cutting torches are used and in yard vehicles.
- ☞ Safety equipment for employees should include rubber or latex gloves and safety glasses.
- ☞ Industrial spill clean-up products or absorbent material for soaking up oils and solvents such as rags, towels, pads, booms and organic absorbents (peat, corn cobs, cellulose fiber, sawdust, wood chips, rice and cotton seed hulls, granular clay, and lime for battery acid).
- ☞ Brooms, shovels and dust pans to pick up clean-up materials.
- ☞ Containers to hold spill waste: drip pans, pails, drums.





Make safety equipment accessible to all employees. Using signs will help employees locate safety equipment during emergencies.

Spills and Leaks Reporting

To Report a Spill or Leak Call your local DEP District Office.





Report:

-  Uncontained spills of toxic, flammable, corrosive, and otherwise dangerous chemicals or spills or discharges of environmentally damaging materials to water.
-  Report petroleum and fuel spills of 5 or more gallons, and any other chemical spill (including lead-acid batteries) to the nearest DEP district office.


Who is required to report?

EVERY PERSON who has any substance or material under their control.

Know Your Facility

-  **Materials Stored.** Understand the characteristics, behaviors and safety precautions associated with the material. The Material Safety Data Sheets (MSDS) provided by the manufacturer or supplier should provide this information.
-  **Material Management.** Review how your company stores and handles its chemicals. Inspect the dispensing equipment and containment construction to prevent accidents from happening.
-  **Planning.** Does your company have a written Contingency Plan or similar document? If your company does not have one perhaps they should draft one to assist employees in planning for a spill.
-  **Exercises.** Conduct table top exercises to see if your company response plan works as planned. Improve and review the company plan with company personnel. Check telephone numbers and ensure the plan contains useful and accurate information.




Reportable Quantity:

-  Determine whether human health or the environment are threatened. Clean up the spill if you are equipped to handle it safely. If uncertain, stop and contain the spill, then request assistance from your nearest DEP district office.

If a Spill Occurs, follow these basic steps:

1. **Observe** the safety precautions associated with the material spilled.
2. **Stop** the source of the spill if possible and clean up the spill right away.
3. **Call** your local fire and/or police departments if fire or public safety hazards are created.
4. **Contain** the spilled material. Dirt, sand or any semi-impermeable material may be used to create a containment structure to prevent material from moving.
5. **Report** the spill. For the number of the nearest DEP district office refer to the map on the back cover.
6. **Recover** the spilled substance while observing safety precautions. Professional contractors may need to be hired if large quantities or dangerous substances are involved or if long term cleanup and investigation is required.

Also:

-  Organic absorbents that contain hazardous wastes cannot be recycled or burned on site.
-  Comply with storage time, quantity, and handling requirements for containers and tanks.
-  Obtain a storage, treatment, or disposal permit if you store, treat or dispose of your hazardous waste on site in a manner requiring a permit.

A QUICK LOOK AT THE WASTE STREAMS

Waste	Best Handling Method
Air bag cartridges	Sell, dispose of properly.
Antifreeze	Reuse, recycle on-site or off-site.
Batteries	Recycle; avoid storing for more than 6 months.
Brake fluid	Collect in a separate container, or with written permission from your waste hauler, manage with your used oil. Otherwise, conduct a waste determination, and if hazardous, dispose of brake fluid through a hazardous waste company.
Empty containers	Reuse on-site after all free product has been removed and the container cleaned. Recycle larger metal containers such as drums. Check with local solid waste landfill to see if they accept empty containers.
Refrigerants	Recover using certified recycling equipment and recycle on-site or send off-site.
Parts washer solvent	Recycle through service provider or conduct a waste determination, and if hazardous, dispose of parts washer solvent as hazardous waste. Extend change-out time until solvent is unusable.
Shop towels	Use a commercial service that provides laundered cloth towels.
Solvents	Conduct a waste determination, and if hazardous, dispose of solvents as hazardous waste.
Sump sludge	Sump sludge should be tested to determine if it is a hazardous waste due to heavy metal or solvent content. If hazardous, manage as a hazardous waste until it is sent to a hazardous waste management facility.
Tires	When possible, recycle, sell, dispose of appropriately.
Transmission filter	Drain fluid, recycle through scrap metal dealer.
Transmission fluid	Recycle.
Used oils	Recycle.
Used oil filters	Drain oil, recycle filter through scrap metal dealer.
Waste fuel	Reuse in a vehicle, recycle or dispose of waste fuel through a hazardous waste company.
Window cleaner	Reuse, sell.

BMPs FOR VEHICLE RECYCLERS

When working with any kind of vehicle fluids, please consider the following practices to help reduce waste streams and keep hazardous substances out of building drains, sumps and off the bare ground.

If You:	Please consider that:	Best management practice
Wash engines or parts	The resulting wastewater is likely to be hazardous from greases, oils and solvents.	<ul style="list-style-type: none"> Only wash engines and parts if absolutely necessary. Keep wastewater separate and evaluate it. Wash on concrete with secondary containment.
Use aerosol solvents or other degreasers	These chemicals can compound waste problems by contaminating washwater, sludge, or bare ground with hazardous materials.	<ul style="list-style-type: none"> Put parts to be cleaned on a drip pan, not on the floor. Use a filtered parts washer to clean engine parts and conduct a waste determination on the solvent, and if hazardous, manage as a hazardous waste. Use aerosols that do not designate as a hazardous waste.
Drain vehicle fluids (oil, brake fluid, antifreeze, etc.)	These chemicals can compound waste problems by contaminating washwater, or bare ground with hazardous materials.	<ul style="list-style-type: none"> Use drip pans under vehicles to collect fluids. Recycle used oils and other fluids. Drain radiators before flushing and recycle waste antifreeze.
Clean shop floors	Hosing the floors down with water or solvent can flush contaminants into the floor drains, contaminating sludges in the system or possibly causing runoff to the bare ground outside.	<ul style="list-style-type: none"> Keep floors clean to avoid the need to wash. Use dry sweeping compounds. Reuse sweeping compounds as long as they remain absorbent. Use dead-end sump to catch and hold washwater if necessary.
Store solvents	Spilled or leaked solvents and their vapors are dangerous and can contaminate bare ground or wastes in the plumbing system.	<ul style="list-style-type: none"> Keep containers closed at all times when not in use. Store solvents in a flammables cabinet. Do not use solvents near drains.
Store waste vehicle fluids in a room with a sealed floor drain	Many materials used in vehicles can be dangerous and can contaminate wastes in the plumbing system.	<ul style="list-style-type: none"> Keep waste containers in a separate, covered storage area with no floor drain. Install a curb, berm or good secondary containment system to contain any wastes that may leak from storage containers. Inspect containers for leaks on a weekly basis. Keep containers labeled properly.
Accidentally spilled material	Many materials used in vehicles can be dangerous and can contaminate bare ground or wastes in the plumbing system.	<ul style="list-style-type: none"> Clean up spills immediately. Notify your DEP District office or the State Warning Point at (800) 320-0519 if appropriate. Have spill cleanup materials on hand and train all employees how to use them properly.

WASTE REDUCTION AND POLLUTION PREVENTION

Vehicular Fluids, Lead, Scrap Metal and Storage Tanks

WASTE STREAM	BEST MANAGEMENT PRACTICES
Vehicular Fluids	<ul style="list-style-type: none"> Use self closing funnels to add material to waste containers. Train employees how to properly manage fluids. Use dedicated equipment, such as drain pans or funnels, for different waste streams to prevent cross-contamination of wastes. Secondary containment, berms or dikes around storage areas can help control the spread of a spill or release.
Lead	<ul style="list-style-type: none"> Avoid long term storage of batteries. Attempt to dispose/recycle batteries every 6 months. It is recommended that batteries be removed from vehicles as soon as the vehicles are brought on site. Place a layer of cardboard between each layer of batteries when stacking the batteries.
Scrap Metal	<ul style="list-style-type: none"> Use only reputable scrap dealers. Businesses are responsible for assuring their wastes are managed and disposed of properly, from cradle to grave. Facilities must demonstrate that at least 50% of the material received on-site is recycled annually. Keep weight slips for scrap metal sent out to verify that 50% recycling is met on an annual basis.
Storage Tanks	<ul style="list-style-type: none"> Roofed secondary containment structures minimize the potential amount of rainwater collected. Check with your local city/county fire marshal for additional requirements.

Cleaning Solutions and Cleaners

Here are some low tech ideas for reducing solvent-based parts washing waste:

TASK	BEST MANAGEMENT PRACTICES
Equipment Operation	<ul style="list-style-type: none"> Think about when parts need cleaning and when they do not. Each use of a parts washing unit increases contamination of the cleaner and shortens the cleaner's useful life. If only interior surfaces need to be cleaned, avoid cleaning the exterior. Remove caked-on grease and oil from parts with a scraper or knife before washing to reduce cleaning time and water used. Segregate cleaning into 2 or 3 stages, each having a dedicated washing unit followed by a clean rinse to reduce solvent usage. Two units extend the usefulness of the solvent. Clean carefully (no splashing or dragging), and use drain racks to save solvent and clean up labor. Cover and turn off circulating sinks to prevent evaporation. Appearance is not always a good indicator of the solvent's ability to clean. Monitoring change out schedules and filtering helps to extend the useful life of the cleaner.

Equipment Management



- Switch to a recirculating spray cabinet for cleaning parts instead of using solvents or switch to solvents that contain non-chlorinated compounds.
- Negotiate your **service contracts** so that solvent change outs fit your use schedule, especially if you have seasonal fluctuations.
- Use parts washers equipped with filters and other separation or treatment options that will **keep the solvent cleaner** longer. Add-on accessories are available.
- Consider an on-site distillation unit to recycle spent solvent.
- Use only the minimum number of parts washers necessary for your business.
- Keep parts washers closed overnight and/or insert a plug into the drain while not in use.
- Use self-closing funnels to add material to waste containers.

Cleaning Solutions and Cleaners (continued)

TASK	BEST MANAGEMENT PRACTICES
Inventory Management	<ul style="list-style-type: none"> ☐ Store products and wastes in closed containers in a covered area protected from rain and sunlight. ☐ Limit access to supplies to prevent waste. Use a computer to track parts and wastes. Do not over order supplies. Use only what you need. ☐ Minimize inventory and use a “first-in, first-out” system to prevent the need for disposal of old or unused materials. ☐ Consider the convenience of using a central cleaning station. Assess individual stations against their potential for accidents, exposure, and waste generation versus convenience and efficiency. ☐ Train employees to use solvents and chemicals correctly and efficiently, using minimum amounts to get the job done. ☐ Maintain a written log documenting the date and volume of waste placed into designated waste containers.

These low tech, low cost ideas can be applied to other vehicle recycling processes as well.

Process Wastes

WASTE STREAM	BEST MANAGEMENT PRACTICES
Process Wastes	<ul style="list-style-type: none"> ☐ Use drip pans to minimize the use of absorbents. ☐ If you must use absorbents, consider reusable or combustible materials. ☐ Use reusable absorbent pads to absorb oil. ☐ Absorbent foam pads can be used to absorb spilled oil and then pressed to remove the oil and reused. ☐ Absorbent booms can be used to reduce the amount of kitty litter needed for cleanups by initially diking the spill. ☐ Use the minimum amount of absorbent to complete the job. ☐ Pick up used absorbent immediately after a spill or leak is cleaned up. ☐ Use refillable, mechanical spray cans rather than aerosol spray cans whenever possible. ☐ Establish a distribution control system to limit aerosol cleaner use. ☐ Use refillable spray cans that do not mist the spray. Consider phasing out spray cans. ☐ Do not air dry solvent-soaked towels or parts. ☐ Use solvents with the lowest possible VOC content or use less hazardous substitutes for solvents such as citrus-based, water-based or detergent based cleaners whenever possible. ☐ Set up a control system to limit towel use. ☐ Label everything down to the smallest bottle!!!!!!

RECYCLING AND DISPOSAL COMPANIES

Solely as a service to the public and Florida businesses, the Florida Department of Environmental Protection (DEP) maintains a list of companies identified as providing reclamation, recovery and recycling services. The information is voluntarily supplied by the companies. A company's absence from the list does not imply prejudice or impropriety. The DEP does not endorse specific equipment or companies.

The DEP, by providing this list, does not imply that the companies are in compliance with the applicable laws and regulations. Users of this list are responsible for assuring that products, equipment and services comply with the requirements of local, state and federal law. The DEP cautions users to personally evaluate the services and compliance status of any company they use. The list is subject to change without notice. The DEP welcomes information from companies that wish to have their products or services listed. Please contact your DEP District office for a list of companies identified as providing reclamation, recovery and recycling services.

A list of recycling and disposal companies can be found on the Florida Center for Solid and Hazardous Waste Management website as an attachment to this Handbook. The Center's website is <http://www.floridacenter.org>.

The List includes the following resources:

**Antifreeze Recycling Companies
(Equipment or Services)**

Battery Recycling Companies

**FLERA (Florida Local
Environmental Resource Agencies)**

Florida Regional Planning Councils.

Mercury-Containing Lamps and Devices

Refrigerant Reclamation Services

Solvent Recyclers

Spill Equipment Vendors

Transportation (Hazardous Waste)

Used Oil and Used Oil Filter Handlers

SELECTED INTERNET SITES

Battelle List of Environmental Internet Sites

<http://www.seattle.battelle.org/services/e&s/moresite.htm>

Chemical Manufacturer's Association - Chemical Transportation EMERGENCIES

<http://www.cmahq.com> or (800) 424-9300

Environmental Protection Agency (EPA) Emergency Planning and Right-to-Know

<http://www.epa.gov> or (800) 535-0202

<http://www2.dep.state.fl.us/air/outreach/sbap/suppl9.pdf> or (800) 741-4337

The Environmental Yellowpages, Inc.

P.O. Box 1375

Coral Springs, Florida 33077

(800) 541-1458

<http://www.enviroyellowpages.com/>

DEP Pollution Prevention Program

<http://www2.dep.state.fl.us/waste/programs/p2/2.htm> or (850) 488-0300

Global Recycling Network - EPA Region 10 Public Information Center

<http://grn.com/grn/>

Greenlink

http://www.ccar-greenlink.org/green_shop.html

Material Exchanges on the Web

<http://enviroworld.com/Resources/matexchs.html>

Minnesota Pollution Control Agency

<http://www.pca.state.mn.us/netcape4.html>

SAGE: Solvent Alternatives Guide

<http://clean.rti.org>

Southern Waste Information Exchange, Inc.

<http://www.enviroworld.com/SWIX/index.html> or (800) 441-7949

Washington Department of Ecology

<http://www.wa.gov/ecology/ecyhome.html>

IMPORTANT PHONE NUMBERS AND HOTLINES

Federal Information Center

(800) 688-9889

DEP Bureau of Emergency Response

(800) 342-5367 or (800) 342-DIALFMP

<http://www.dep.state.fl.us/law/ber>

DEP Waste Management Issues

(800) 741-4337 or (800) 7414-DEP

Florida State Warning Point (24 hour)

(800) 320-0519 24 hour

Florida Waste Exchange for Profit

(954) 967-0011

Hazardous Material Identification (MSDS)

(800) 631-1884

Hazardous Substances

(800) 633-7585

Lead Exposure (specific inquiries)

(800) 262-5323

National Response Center –

oil/chemical spill reporting

(800) 424-8802

NIOSH – Occupational Safety and Health

(800) 356-4674

Recycle Florida Today, Inc.

<http://enviroworld.com/Resources/RFT.html>

or (813) 441-6425

RCRA (EPA)

<http://www.epa.gov/epaoswer/hotline>

or (800) 424-9346

SPILL REPORTING – 24 HOUR NUMBERS

National Response Center

(800) 424-8802

Waste Treatment Technology and Vendors

(800) 245-4505

Wastewater Treatment/Water Quality

(800) 624-8301

Worker Right-to-Know

(800) 423-7233



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WHERE CAN I GET MORE INFORMATION?

Additional information on hazardous waste reduction and regulations is available from many sources.

Florida Department of Environmental Protection

District offices and the Tallahassee office offer technical assistance, fact sheets and other publications on hazardous waste regulations.

Hazardous Waste Compliance Assistance Program

Phone: (800) 741-4337

(850) 488-0300

Fax: (850) 921-8018

Florida Small Business Assistance Program

The Small Business Assistance Program helps businesses with environmental concerns and problems related to compliance with air regulations. Assistance is confidential and staff experts have business experience.

Phone: (800) 722-7457

U.S. Environmental Protection Agency

The EPA has published a series of industry-specific guidelines and handbooks on preventing pollution and complying with hazardous waste regulations.

RCRA Hotline

Phone: (800) 424-9346

DEP Fact Sheets available:

Florida Fact Sheet on the Best Management Practices for Managing Antifreeze Destined for Recycling

Fact Sheet: Requirements for Conditionally Exempt Small Quantity Generators of Hazardous Waste

Fact Sheet: Requirements for Small Quantity Generators of Hazardous Waste

Florida Fact Sheet on the Management of Waste Antifreeze

Florida Fact Sheet on Used Oil in the Environment

Florida Fact Sheet on the Management of Used Oil and Used Oil Filters

Pollution Prevention Fact Sheet on Using Aqueous Cleaners

Pollution Prevention Fact Sheet on Evaluating Cleaning Liquids

Pollution Prevention Fact Sheet on Aqueous Cleaner Additives

Pollution Prevention Fact Sheet on Terpene Cleaners

Pollution Prevention Fact Sheet on 'Dry' (Non-Solvent) Cleaning

Pollution Prevention Fact Sheet on New Cleaning Solvents

Pollution Prevention Fact Sheet on Hydrocarbon Based Cleaners

Pollution Prevention Fact Sheet on Cleaning Equipment

DEP Publications available:

Summary of Hazardous Waste Regulations

Requirements for Conditionally Exempt Small Quantity Generators

Requirements for Small Quantity Generators

Handbook for Small Quantity Generators of Hazardous Waste

BEST MANAGEMENT PRACTICES CHECKLIST

The following pages include perforated checklists that coordinate with the BMPs summarized within this Handbook. The checklists can be removed for use within your auto salvage operation. Please make copies of the checklists as needed.



Vehicular Fluid Management

	Drain and collect all fluids on a covered, curbed and sealed concrete area away from any drains.
	Do not dispose of vehicular fluids down storm drains, in septic tanks, dry wells, sewer systems, dumpsters or on bare ground.
	Store fluids in covered containers protected from weather and on a curbed, impermeable, concrete surface.
	Maintain spill control material and equipment nearby stored fluids.
	Check all fluid storage containers on a weekly basis.

Container Maintenance

	Maintain containers in good condition and routinely inspect for signs of rust, leaks or defects.
	Prevent leaks, ruptures and accumulation of rainwater on top of drums.
	Keep containers closed when not actively adding or removing material.
	Never place incompatible wastes, such as wastes that react with each other, in the same container. (e.g. Do not store acids and bases in the same container.)
	Wastes must be compatible with the container in which they are being stored. For example, use plastic containers for corrosive wastes.
	Label containers properly.
	Leaks or spills must be stopped, contained and managed immediately and the container repaired or replaced.
	Maintain a written log documenting the date and volume of waste placed into designated waste containers.

Labels

	Label every container with the contents and type of waste.
	Label every container with whether it is a hazardous waste or a non-hazardous waste.
	Include federal waste code numbers.
	Include the accumulation start date (the date when waste was first stored in the container).
	Include your business' name and address.

Storage

	Store containers in an area protected from weather and on a curbed impermeable surface.
	Separate characteristic wastes by waste classification: Toxicity, Ignitability, Corrosivity, and Reactivity.
	Don't combine hazardous waste with non-hazardous waste.
	Store ignitable and reactive wastes within property limits, at least 50 feet from property boundaries.
	Store containers of incompatible wastes in separate areas.
	Maintain aisle space between containers to allow inspection for leaks and damage.
	Be aware of allowable time limits for storage.

Transport and Disposal

	Make sure your transporter and disposal facility have EPA identification numbers.
	Use manifests for all hazardous wastes shipped offsite.

Training

	Train all employees to identify, reduce and properly handle wastes.
	Train new employees before they handle hazardous wastes.

Storage Tank Requirements

	Register underground storage tanks (USTs) larger than 110 gallons that contain petroleum such as motor fuel, new or used oils, new or used transmission fluids, and new or used hydraulic fluids.
	Register aboveground storage tanks (ASTs) larger than 550 gallons that contain petroleum such as motor fuel, new or used oils, new or used transmission fluids, and new or used hydraulic fluids, or hazardous substances.
	Label tanks and fill pipes with words identifying the contents.
	Assure that the tanks are in compliance with leak detection requirements.
	Assure that the storage tanks meet the appropriate secondary containment requirements.
	Upgrade the tanks to meet spill, overfill and corrosion protection requirements.
	Notify the DEP-Contracted County immediately (within 24 hours or the close of the next business day) in the event of a discharge of 25 gallons or more.
	Do not remove, close, or upgrade any regulated storage tank without first notifying the DEP-Contracted County.
	Do not leave the secondary containment drain valve open.
	Maintain the secondary containment structures by keeping them free of debris.
	Manage the liquids collected in the secondary containment structures appropriately.
	Routinely inspect the integrity of the secondary containment structures by checking for cracks, holes, etc.
	Maintain written documentation of secondary containment inspections.
	Assure financial responsibility and/or provide third party liability and cleanup-remediation insurance.

Inspections & Recordkeeping

	Inspect containers at least once a week and keep a written log of container inspections.
	Keep training and inspection records for 3 years.
	Keep manifests and shipping receipts for 3 years.
	Keep records of lab tests for 3 years.
	Keep completed land disposal restriction forms for 3 years.
	Get receipts to verify payment for disposal.

Brake Fluid

	Do not spray brake cleaner around containers of brake fluid.
	Do not dispose of brake fluid down any drain, on the ground or in a dumpster.

Gasoline/Diesel

	Label containers of reusable fuel clearly: " REUSABLE GASOLINE " or " REUSABLE DIESEL ."
	Manage contaminated fuel in designated containers and label containers of waste fuel clearly: " WASTE FUEL " and use appropriate hazardous waste labels.
	Reusable fuel may be used in facility or employee vehicles.
	Do not mix fuel with any other waste streams, without written permission from your waste hauler.
	Properly dispose of contaminated fuel and maintain the disposal receipts for at least 3 years.

Transmission Filters

	Transmission filters should be handled like used oil filters ONLY with prior approval from the used oil filter hauler, otherwise, manage used transmission filters as a separate waste stream.
	Refer to the USED OIL FILTER guidelines.

Antifreeze

	Use separate equipment for the collection of used antifreeze (funnels, pads, storage containers).
	Label used antifreeze collection equipment and containers " USED ANTIFREEZE. "
	Keep waste antifreeze free from cross-contamination with other wastes including used oil, fuels, degreasers or radiator flush chemicals.
	Consider keeping antifreeze in two separate, closed containers: one for antifreeze that cannot be reused marked " WASTE ANTIFREEZE, " and one marked " USABLE ANTIFREEZE. "
	Label reconditioned or recycled antifreeze containers " RECONDITIONED OR RECYCLED ANTIFREEZE. "
	Label antifreeze containers with the starting date of accumulation.
	Do not accumulate used antifreeze for longer than 180 days.
	Recycle by reuse. Methods of processing waste antifreeze include: distillation, filtration or ion exchange. Recycling can be done on-site or off-site by an antifreeze recycling service.
	Conduct a waste determination on waste antifreeze filters generated from recycling process equipment, or handle as a hazardous waste.
	Maintain records of used antifreeze shipments and filter management for a minimum of 3 years.
	Maintain a log documenting the volume of waste antifreeze processed through on-site recycling equipment
	Maintain records of analytical waste determinations and disposal receipts for at least 3 years.

Gear Oil, Power Steering Fluid, Transmission Fluid

	Crude-based petroleum products can be managed like or with your used oil ONLY IF they have not been mixed/contaminated with hazardous wastes such as solvents, brake cleaner or carburetor cleaner.
	Do not dispose of crude-based petroleum products in a storm drain, septic tank, dry well, sewer system or dumpster.
	Refer to the USED OIL guidelines.

Used oils

	Label containers properly: " USED OIL "
	Fill pipes used to transfer used oil into underground storage tanks (USTs) must be labeled " USED OIL. "
	Used oils can be mixed together and stored in the same container for collection by a state registered used oil transporter.
	Do not accidentally contaminate your used oil with even small amounts of brake cleaner, carb cleaner, or solvents. Even small amounts of chlorinated solvents turn recyclable used oil into a hazardous waste.
	Do not mix antifreeze, solvents, gasoline, degreasers, paint or anything else with used oil, without written permission from your used oil hauler.
	Do not pour used oil on the ground or use for weed control.
	Do not mix used oil with other solid waste destined for a landfill.
	Used oil may be recycled by recovery and re-refining by a state permitted used oil processor. Approved used oil transporters must be registered with the state. Check with your DEP District Office for a list of approved used oil/used oil filter transporters and processors.

Fuel Filters

	Some landfills will take used non-hazardous fuel filters if the are punctured and drained for 24 hours. Check with your local landfill for information.
	Drain excess fuel from filters into a proper fuel container.
	Accumulate used fuel filters in a separate, fireproof container marked " USED FUEL FILTERS. "
	Metal fuel filters can be handled with used oil filters if the filters are drained and dry.
	Glass filters should be managed separately and require a waste determination.

Used Oil Filters

	Used oil filters should be punctured and drained for 24 hours prior to disposal.
	Keep drained filters in a separate aboveground container labeled " USED OIL FILTERS ."
	Put oil drained from filters into your " USED OIL " container.
	Maintain storage containers in good condition, indoors, protected from weather or sealed/closed, on an oil-impermeable surface.
	Do not discard any filters in the dumpster without written permission from your local disposal company.
	Maintain disposal/recycling receipts for at least 3 years.

Refrigerants

	Refrigerants must be evacuated and recovered prior to crushing vehicles or appliances (white goods).
	Have certified technicians remove refrigerants from all vehicles using EPA-approved recycling/recovery equipment.
	Do not evaporate or vent refrigerants to the atmosphere.
	Maintain records that the refrigerants were recovered on-site, or
	Maintain records that the vehicle/appliance was brought into the facility free of refrigerants and that the refrigerants were removed using the proper methods prior to entering the facility.
	Store refrigerant in tanks that meet U.S. Department of Transportation (DOT) or Underwriters Laboratory (UL) standards. Label tanks with their contents: " REFRIGERANTS ."
	Do not recharge a vehicle's system with recovered refrigerants unless the vehicle is owned by your facility or unless a U.S. EPA certified technician is recharging the vehicles on-site.
	Maintain records documenting the volume and final destination of recovered refrigerants.

Lead Acid Batteries

	Remove batteries before crushing any vehicles.
	Check batteries for leaks, cracks, etc. prior to storing.
	Place cracked or leaking batteries in a closed, watertight, acid resistant storage container.
	Store batteries upright, on wooden pallets, in a secure, covered location, on a bermed impermeable surface or in watertight, acid resistant containers.
	Do not pile batteries higher than 4 batteries high.
	Keep spill control equipment near batteries to neutralize any acid release (e.g. baking soda, lime).
	Do not place lead acid batteries in the garbage or incinerate batteries.
	Do not pour battery acid on the ground or into a drain.
	Ensure that battery cores are distributed to a battery wholesaler/retailer, a permitted secondary lead smelter, a collection center or a reputable recycler.
	Maintain recycling or disposal receipts for at least 3 years.

Lead Parts

	Remove lead tire weights and battery cable ends before crushing vehicles. Battery cable ends may be left on usable batteries and recycled along with the batteries.
	Store lead parts in a covered container that is strong enough to hold the weight of the lead.
	Recycle lead parts with a metals or battery recycler.

Flourescent and High Intensity Discharge Lamps

	To recycle lamps, store them in a manner that prevents them from breaking, and label each container with " SPENT MERCURY-CONTAINING LAMPS ".
	Businesses are allowed to store up to 5,000 kilograms of lamps (20,000 lamps) for up to one year if the lamps are destined for recycling. Be able to demonstrate that you have not had the lamps stored for more than one year.
	Do not break or crush lamps.
	Maintain records of analytical waste determinations, shipping papers, disposal or recycling receipts for at least 3 years.

Mercury Switches

	Remove all mercury switches from the vehicle as soon as possible.
	Be careful not to break or puncture the mercury container during removal.
	Store mercury switches in a leak-proof, closed container. Store in a way that will prevent the capsules from breaking. Be able to demonstrate that you have not had the devices stored for more than one year.
	Label storage containers with " SPENT MERCURY-CONTAINING DEVICES FOR RECYCLING ".
	Recycle mercury switches with a licensed metals recycler that reclaims mercury.

Scrap Metal

	Catalytic converters may be removed prior to crushing and recycled for their platinum content.
	Obtain an (air) Operating Permit or Exemption to operate a smelter or reclaiming furnace on-site.
	Do not operate a smelter in a manner allowing wastes or wastewater to impact soil.
	Conduct waste determinations on wastes generated from the smelter (i.e. wastewater, ash, slag, sludge) and manage appropriately.
	Maintain a written log documenting the date and volume of waste place into designated waste containers.
	Maintain records of analytical waste determinations and disposal/recycling receipts for at least 3 years.
	Maintain receipts for all scrap metal shipped off-site (including vehicles for shredding) for at least 3 years.

Waste Tires

	Store waste tires indoors or outdoors with a cover to prevent the collection of standing water and to prevent mosquito larvae from thriving.
	If tires cannot be processed in a timely manner, leave tires on the rims to avoid problems with the mosquitos until the tires can be managed properly.
	Do not accumulate more than 1,500 tires on site without a permit from the DEP.
	Do not burn or bury waste tires.
	Transport stored waste tires regularly to prevent large accumulations.
	All haulers of over 25 tires must register with the DEP; use only vendors registered with the DEP.
	Dispose of waste tires at a permitted or DEP approved facility.
	Maintain disposal/recycling receipts for at least 3 years.

Aqueous Parts Washers/Wastewater Management

	Use either an on-site capture and reuse system for wastewater or have a connection to a city sewer and wastewater treatment facility with the proper permitting. The city sewer plant must be a publicly owned treatment works facility (POTW).
	Notify and get written approval from the sanitary sewer system prior to discharging any wastewater.
	Recirculate and reuse water until unusable.
	Do not dispose of spent parts washer fluids on the ground, down a drain, or in a dumpster.
	Conduct a waste determination on spent parts washer fluid and filters and dispose of properly.
	Maintain a written log documenting the date and volume of the waste placed into designated waste containers.
	Maintain records of analytical waste determinations and disposal receipts for 3 years.

Hot Tank Solutions

	Accumulate spent cleaning solution and sludge removed from hot tanks in closed, labeled containers.
	Maintain a written log documenting the date and volume of the waste placed into designated waste containers.
	Conduct a waste determination on spent solution and sludge and dispose of properly.
	Maintain records of analytical waste determinations and disposal receipts for 3 years.
	Notify and get written approval from sanitary sewer system prior to discharging any wastewater.

Parts Washers

	Do not dispose of spent parts washer fluids on the ground, into drains, or by evaporating to the air.
	Do not use aerosol spray cans near your parts washers.
	Conduct a waste determination on spent parts washer fluid, sludge and filters and dispose of properly.
	Maintain a written log documenting the date and volume of the waste placed into designated waste containers.
	Maintain records of analytical waste determinations and disposal receipts for 3 years.

Pressure Washing

	Pressure wash parts and engines over a contained, impervious surface such as a wash table that drains to an oil water separator.
	Do not allow wastewater, oils or greases on the ground.
	Do not allow wastes to flow into a septic tank or a drain leading to a ditch, stream, lake or dry well.
	Check with your local sewer utility to verify that drains in your pressure washing containment area are connected to a sanitary sewer system that is a publicly owned treatment works facility (POTW).
	Notify and receive written authorization prior to discharging wastewater to a sanitary sewer system.
	Maintain an oil/water separation system or sump regularly.
	Equip the oil/water separator with an emergency shut-off to prevent spills from entering the sewer, or discharging directly to surface waters.
	Conduct a waste determination on spent solution and sludge and dispose of properly.
	Maintain a written log documenting the date and volume of the waste placed into designated waste containers.
	Maintain records of analytical waste determinations and disposal receipts for 3 years.

Sump Sludges

	If sludge tests as a hazardous waste, manage as a hazardous waste and dispose of the sludge through a hazardous waste management facility.
	Do not put hazardous sludge in the dumpster or on the ground.
	Do not use a septic tank pumping service to dispose of sludge. There is no legal, environmentally safe way for these services to dispose of the waste if it is a hazardous waste.
	Maintain records of analytical waste determinations for 3 years.

Brake and Carburetor Cleaners

	Keep containers of brake and carburetor cleaner closed when not in use.
	Do not mix brake/carburetor cleaners with other solvents, i.e. solvents from parts washers.
	Collect spent brake or carburetor cleaner and residue in designated waste containers.
	Do not dispose of cleaners down any drain, septic system, dry well, dumpster or on the ground.
	Conduct a waste determination on spent cleaners and dispose of properly.
	Maintain records of analytical waste determinations and disposal receipts for at least 3 years.

Solvents

	Read product labels and MSDSs to determine if a product contains hazardous solvents.
	Purchase and use non-chlorinated aerosol solvents.
	Do not mix solvents.
	Do not discharge any solvent into a septic tank, sanitary or storm drain, surface water or the ground.
	Keep containers and solvents sinks closed when not in use.
	Conduct a waste determination on spent solvents and dispose of properly.
	Maintain records of analytical waste determinations and disposal receipts for at least 3 years.

Air Bags

	Remove all unused air bag units when vehicles enter the facility.
	Store undeployed air bag units indoors, protected from the weather until they can be resold.

Asbestos

	Asbestos waste should be placed in a heavy plastic bag, double bagged, double tied, and stored in a leak proof, airtight container designated for asbestos waste.
	Do not eat, smoke or drink in asbestos work areas.
	Wash thoroughly before eating or going home.

Absorbents: Granular (Kitty Litter), Foam Pads, Booms (Pigs)

	Maintain absorbent material in areas where fluids are generated, managed or stored.
	Soak up leaks and spills as soon as they occur and remove them in a timely manner.
	Manage absorbent that comes in contact with hazardous waste as a hazardous waste.
	Do not mix spent non-hazardous absorbent with spent hazardous absorbent.
	Do not put spent absorbent in drains, on the ground, or in vehicles to be crushed or shredded.
	Maintain written verification from your solid waste hauler regarding the disposal of absorbent in the dumpster.
	Maintain records of analytical waste determinations and disposal receipts for at least 3 years.

Aerosol Spray Cans

	Use the entire spray can before starting another, and empty cans completely before discarding.
	If a spray can malfunctions, handle as a hazardous waste or consider returning it to your supplier.
	Do not spray in/or around other solvents, waste or open containers to prevent contamination.
	Never spray a product in the air in lieu of proper disposal.
	Collect and conduct waste determinations on spray cans which are not empty.
	Maintain records of analytical waste determinations and disposal receipts for at least 3 years.

Contaminated Soil

	Prevent spills before they happen. Cleanup spills as soon as they happen or are discovered.
	Excavate contaminated soil as spills and leaks occur to prevent migration of the contamination.
	Collect the soil in appropriate, labeled containers and store the containers on a covered, impermeable containment area until it can be cleaned or transported to a waste treatment facility.
	Do not dispose of contaminated soil in vehicles to be crushed or shredded.
	Do not store contaminated soils for an indefinite amount of time. Dispose of promptly to avoid additional contamination.
	Contact used oil haulers, soil thermal treatment facilities, hazardous waste transporters, and your local municipal solid waste landfill or incinerator concerning the disposal of contaminated soil.
	Conduct a waste determination on the soil prior to its disposal.
	Maintain records of analytical waste determinations and disposal receipts for at least 3 years.

Dust

	Surface apply chemical suppressants to non-traveled areas. Used oil cannot be used for this purpose.
	Vegetate or mulch areas that don't receive traffic.
	Apply gravel or rock, or pave areas.
	Do not clear more vegetation than is necessary to provide ample work areas.
	Construct natural or artificial wind breaks or wind screens.
	Lower speed limits on roads.
	Cover piles to protect from wind.

Shop Towels

	Try not to use disposable towels. If possible, use cloth towels from an industrial laundry service discharging its wastewater into a public sewer system.
	When possible use non-chlorinated or low VOC cleaning compounds. Using chlorinated solvents will cause the rags to be a hazardous waste.
	Do not dispose of solvents by pouring them onto rags or into containers of used shop towels.
	Do not throw dirty wipes, paper towels or rags into the dumpster if they have come into contact with hazardous solvents or waste.
	Liquid petroleum wastes should not be draining from towels placed into the trash.
	Do not dispose of dirty shop towels in vehicles to be crushed or shredded.
	Keep waste shop towels in a closed, fireproof container labeled " USED SHOP TOWELS ".
	Maintain records of analytical waste determinations and disposal receipts for at least 3 years.